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INTERGENERATIONAL LEARNING AMONG TEACHERS: AN INTERACTION PERSPECTIVE

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Abstract

The paper draws on the theory of learning by Knut Illeris to interpret data from qualitative research in intergenerational learning at Czech primary and lower secondary schools. It is focused on describing the forms of interaction through which intergenerational learning among teachers takes place, i.e., perception, transmission, experience, imitation, and participation. The results of the analysis are interpreted in the school context in order to show how interaction research may contribute to the analysis of intergenerational learning in a specific institution.

Keywords

teacher learning, intergenerational learning, learning interactions, theory of learning by Knut Illeris

Introduction

In looking for situations in which teachers of different generations learn from one another, we find many moments that teachers refer to as talking shop, drawing inspiration as to how to do a specific thing differently, or taking a set of problems to a particular colleague. To what extent is it legitimate to call these (and many other) cases learning? Can a learning situation be identified? How are these situations shaped by the protagonists' interactions?

To answer these questions, this paper draws on qualitative research conducted in Czech primary and secondary schools, the goal of which is to describe how teachers of different generations learn from one another. This paper offers a perspective of intergenerational learning based on participant interactions. Focusing on these interactions places the participants, and thus the intergenerational aspect of the process, in the foreground. Interaction is a visible component of the process of intergenerational learning, thanks to which we can form a relatively vivid idea of the richness of the range of intergenerational learning situations taking place among teachers of different generations in schools. Moreover, as we show towards the end of this paper, interaction analysis may help us obtain information on how intergenerational learning is represented in a specific school. The theoretical basis for our interpretation of the processes of learning was provided by the comprehensive theory of learning by Knut Illeris. Illeris (2003, 2007, 2010) describes the process of learning in terms general¹ enough for application to a rich set of informal talks about work, peer, and informal teacher training sessions, and cooperation between induced and inducing teachers. In order for specific situations to be regarded as learning situations according to Illeris, they must involve a “permanent capacity change” (Illeris, 2007, p. 5). This process of change can be described in terms of three dimensions: *content*, *incentive*, and *interaction* (Illeris, 2007, p. 22). Illeris calls for understanding the *content* dimension more broadly than just as a change in knowledge, skills, or attitudes (Illeris, 2007, p. 51); it involves, for instance, even efforts to look for the significance of what has been learned, “acquiring a general readiness to understand, follow, and critically relate to the world about us” (Illeris, 2007, p. 75) and ourselves. The *initiative* dimension includes “motivation, emotion, and volition” (Illeris, 2007, p. 75) and “it concerns mobilization of

¹ Learning is defined here as “any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing. This definition implies that processes such as socialisation, qualification, competence development and therapy are regarded as special types of learning processes or special angles from which learning is viewed” (Illeris, 2007, p. 5).

the mental energy required by learning” (Illeris, 2007, p. 26). Finally, the *interaction* dimension, which is the focus of this paper, situates learning in a specific society (the working environment in school, a specific school in our case) and a specific form of interaction between the learner and the environment (in our case, the specific interaction of teachers in a specific space, not necessarily the school – such as email exchanges between former colleagues, two colleagues talking on the occasion of a celebration, etc.).

Although Illeris rejects the creation of a comprehensive typology of forms of learning interactions, he offers a brief annotated list of typical forms of interaction, consisting of *perception* (learning based on perceiving a stimulus which has not been sought out actively), *transmission* (the educator transmits certain content to the learner), *experience* (learning through an activity pursued by the learner), *imitation* (learning through imitation), *activity* (active search for learning content by the learner), and *participation* (learning through participating in a specific situation the learner co-creates)² (Illeris, 2007, pp. 100–101). Other authors offer similar lists of interactions (e.g., Elkjaer, 2004, differentiates between types of learning interaction such as *participation*, *observation*, *interaction*, and *dialogue*), but Illeris’s list is distinguished by the effort to cover, in a comprehensive way, all possible forms of interaction. This is worthy of respect; nevertheless, we believe that the form of interaction referred to as *activity* (cf. Illeris, 2007, pp. 57–59, 101) significantly overlaps with other categories (*imitation*, *participation*, and partly also *experience*) because within them, the “learner actively seeks influences that can be used in a particular context that the person concerned is interested in” (Illeris, 2007, p. 101). This is why, despite using the forms of interaction proposed by Illeris as comprehensive and general categories as a starting point for structuring interactions in intergenerational learning among teachers (see the Methodology section of this paper), we will be using only the five categories other than *activity*.

With a view to operationalization, we decided to frame the processes of learning taking place among teachers with the concept of *learning situations*. We define a learning situation as a section of reality within which at least one of the participants is learning, with the situation reflected as such by the learner, i.e., the individual is able to specify the content of their learning (such as how to divide two-digit numbers) as well as the interaction (the learner is able to specify the person from whom they have learned the content and the occasion when this occurred). The duration of the learning situation corresponds to the conclusion of the process of change as it is later reflected

² These forms of interaction will be described below in detail, including how Illeris defines them.

(e.g., secondary-school students are unaware of how the teacher is teaching, but when reflecting on their own teaching and using for themselves what their teachers used in their pedagogical work, we can talk of an integral learning situation).

This definition of learning situations naturally reduces our perspective by excluding unreflected, unconscious, or even involuntary learning – which certainly limits our approach. On the other hand, this brings our approach closer to those descriptions of the learning process which regard reflection as an inseparable part of the process (cf. e.g., Mezirow, 1990; Schön, 1991). Linking a learning situation with its reflection is, according to some theoreticians (e.g., Kolb, 1984; Moon, 2004; etc.), one of the prerequisites of conscious application into practice, which we regard as important, given that our research concerns learning in the workplace, where the application of acquired knowledge is of key importance.

The specific research we are focusing on in learning situations is their intergenerational nature. The concept of intergenerational learning focuses on learning taking place through interactions between members of different generations. This feature brings about more than the simple transfer of certain contents from one generation to another³. Intergenerational learning is perceived rather as a bi-directional process (Ramon & Turini, 2008), the importance of which is increasing in light of current demographic trends in society and the need to maintain intergenerational continuity in society as a whole as well as in the component parts of its structure. Increasing attention is being paid to intergenerational learning in the workplace (cf. e.g., Bell & Narz, 2007; Glass, 2007; Patterson, 2007). Interpretations of the concept of generation vary, and defining it is beset with problems (Corsten, 1999). There are two widespread approaches to its definition. First, generations can be defined based on family roles; for instance, learning between grandchildren and grandparents is studied with little to no consideration of when the individual participants were born (see Kenner, Ruby, Jessel, Gregory, Arju & 2007; Rabušicová, Kamanová & Pevná, 2011). The second approach tends to refer – to a greater or lesser extent – to the definition of generation provided by Mannheim (2007), based on the observation that people of a particular generation experience the same historic events in the same periods in their lives, which, in turn, predisposes the members of the same generation toward

³ Typical contents include those connected to ICT use, brought by the younger generation for the sake of the older one, and contents connected with household chores or life experience, typically brought by the older generations for the sake of the younger one (Cherri, 2008; Rabušicová, Kamanová & Pevná, 2011).

some shared experiences. In the Western world, economically active generations are currently referred to (see, e.g., DeLong, 2004) as the Baby Boomers (1943 through early 1960s), Generation X (early 1960s through early 1980s), and Generation Y (1980s to early 2000s), and relevant research is dedicated to exploring how individual generations (assumed to be characterized by shared features) interact or how their behaviors differ in specific situations (see, e.g., Leiter, Jackson & Shaughness, 2009; Beutell & Wittig-Berman, 2008). Considering the different historical context in the Czech Republic, these definitions of generations are not applicable to the Czech environment (see, e.g., Šubrt & Vinopal, 2013, pp. 160–169); moreover, research confirming behavioral specificities among members of one generation in specific situations similar to what we are exploring is not available.

Factors of key importance for defining generations in the context of workplace relations include not only age (i.e., membership of a specific age cohort) but also the duration of work experience of the specific employee. This is how Sue Tempest (2003) works with the concept of generation, viewing intergenerational learning in the workplace as a “potentially rich, reciprocal process of learning that builds from marrying the diverse knowledge bases of workers with different levels and types of work and life experiences”.⁴

These factors (life path and work experience) may be combined to provide a basis for defining teacher generations in a school. Relying on studies exploring occupational intergenerational learning in other areas (Urbancová & Vnoučková, 2014), we believe it is meaningful to work with a younger generation of teachers in Czech schools (teachers approximately up to 30 years of age), a middle generation (approximately between 30 and 50 years of age), and an older generation (approximately 50 and above). This division roughly echoes the 20-year gaps between generations sharing the workplace. To take into account the development of an individual teacher’s career, usually conceptualized as consisting of a higher number of distinct phases (see, e.g., Lukas, 2011), we opted for a more detailed categorization of teacher generations in a school. The younger generation, which has a considerable overlap with novice teachers, will remain without an internal differentiation in our approach. Within the stages of the teacher’s path, it has the shortest duration (lasting 2–5 years); the stage ends with the onset of maternity leave for some

⁴ Besides focusing our perspective in defining the concept of generation, we view this definition as useful even as a motivation for replacing the understanding of learning in the workplace as a linear path from one place to another – from the periphery to the center, from a novice to an experienced worker (see, e.g., Brown & Duguid, 1991; Elkjaer, 2004).

women or it may be marked by the delegation of a responsibility within the school or a change in status within the teaching staff for other teachers (see Švaříček, 2009a). In the light of teacher path development, we believe it is useful to distinguish between the younger middle generation and the older middle generation, as it is in this period that the transformation from an experienced teacher into an expert teacher may occur (see, e.g., Lukas, 2011; Švaříček, 2009a). We leave the older generation without an internal differentiation; its temporal definition is highly individual as it is connected with the teacher's attitude to work (see, e.g., Průcha, 1998) as well as their position on the teaching staff, desire to continue working past retirement age, etc.

Due to the impossibility of assigning teachers unequivocally to categories based only on their age, we regard their self-classification and classification by their colleagues as important: if a specific learning situation is to be regarded as *intergenerational* learning, it is necessary that the participants perceive one another as members of different generations (see the Methodology section).

We regard *intergenerational learning among teachers* as a process within which an interaction between teachers who perceive each other as members of different generations induces a permanent change in at least one of the participants, which that participant is able to reflect. *An intergenerational learning situation* is thus framed by the stimulus sent by the educator, it is organized around the change in the learner, and it concludes with reflection – the latter two processes may be simultaneous. We refer to the interaction between the educator and the learner learning in an intergenerational learning situation as an *intergenerational learning interaction*. It is important to emphasize that the division of the participant roles into educator and learner does not exclude – as has already been mentioned – the reciprocity of intergenerational learning. If both participants perceive a specific interaction as beneficial to their own learning, we believe it is useful to speak of two learning situations, since – in addition to the differing participant roles – this learning usually also has different contents.

School as a context for intergenerational learning situations among teachers

Interaction at the level of behavior of the individual participants is always influenced by the situational framework within which it takes place, in our case, within the context of the school as the teachers' work environment. Drawing on Verbiest (2011), learning interactions of teachers in this environment may be understood in terms of three indicators: the embeddedness in formal structures (how learning processes are purposefully supported and

evaluated by school management), the number of teachers involved in learning relations, and the quality – or depth – of these processes.

As for **formal embeddedness** of intergenerational learning in Czech schools, there is currently no official strategy to support them, and one may note that all of the means of supporting intergenerational learning discussed below implicitly involve the direction from older to younger teachers. The concept of the induction of novice teachers by experienced teachers seems to be the most widespread in practice. This idea is implemented in schools (where appropriate) with great variance in emphasis, ranging from well-functioning to purely formal models (see Lazarová, Sekot, Kot'a, Vašutová, Lukas & Paulík, K.2011; Pol, 2007).

Besides induction, the concept of mentoring, which may also involve an intergenerational aspect, has emerged in schools as workplaces (see, e.g., Píšová, Duschinská, Kargerová, Lampertová, Lukavská, Szimetová & Tomková, 2011). We follow Lazarová, et al. (2011) in defining the basic prerequisites for a functional learning situation of this kind to occur as: closeness of personal characteristics, comparable professional focus, closeness of educational “philosophy”, compatible schedules, readiness to develop informal relations, and willingness to offer cooperation beyond supervision. In the Czech context (see Pol & Lazarová, 1999), efforts to provide formal support for collegial learning interactions implemented through a variety of strategies proposed by school managements often have not turned out well.

The institution of visits to the classroom plays a special role. Although it is true that these visits, as encounters between teachers of different generations, may involve a great learning potential (Little, 1990), the focus is often on control rather than support. Visits to the classroom are often made by the deputy headmaster, the headmaster, or the subject committee head (consistent with their job descriptions), and often induce defensive reactions on the part of the teachers as well as efforts to cover up potential inadequacies rather than to open the scope for learning (see Pol, 2007).

The teachers' **degree of involvement** in learning interactions may vary within one school considerably and is affected by a number of specific factors of the school environment. These include primarily individual approaches to many teaching activities (Pol, 2007; Stankovic, 2009) because teachers spend most of their working time with pupils in the classroom (see Průcha, 2002, p. 95) and their colleagues thus only have a rough idea of what they do (Kasíková & Dubec, 1999; Dvořák, Starý, Urbánek, Chvál & Walterová, 2010), which in any case may fail to correspond to reality (Švaříček, 2009b). It may therefore be assumed that teachers can often work without being required to interact with their colleagues in any significant way. Considering that teachers regard the lack of support from their colleagues and school management to be one of the four principal stressors (Urbánek, 2009), this

interaction framework is not likely to be acceptable for most teachers on a long-term basis.

The presence of learning processes in a given school may be analyzed using the typology by Kasl, Marsick, and Dechant (1997), who distinguish *fragmented learning* (in schools where occasional and sparse sharing of information and views prevails), *pooled learning* (sharing related mainly to a task that a specific group of teachers is to accomplish), *synergistic learning* (spontaneous information and view sharing in groups of teachers, combined with open discussion of differences), and *continuous learning* (when pooled learning processes become widespread across the institution).

Involvement in learning interactions can be perceived not only in terms of the numbers of participants partaking in learning interactions but also in terms of using benefits of this learning – whether it tends to be employed individually or collectively (see Simons & Ruiters, 2001). The situation when collective learning meets the collective use of its outputs is regarded as most beneficial to an organization (Verbiest, Ansems, Bakx, Grootswagers, Heijmen-Versteegen, Jongen, Uphoff & Teurlings, 2005).

This brings us to a third way to describe the school context as providing background to learning interactions among teachers – the quality or **depth of interaction**.

Gherardi and Nicolini (2002) confirm the importance of informal relations in the workplace for occupational performance, and Kersh and Evans (2007) discuss the importance of these relations for learning: thanks to informal relations, the worker gets involved in formal learning situations and also becomes a part of entirely informal situations which are no less important. A coffee break or shared journey from work may often provide an opportunity to acquire the language spoken in the workplace, to learn to “see” things of key importance for the profession or organization, and to understand the unwritten rules influencing the work (Blaka & Filstad, 2007).

The key question therefore concerns the quality of relations in the workplace, how much it approaches the personal level and how much scope for learning it provides. Little (1990) distinguishes several types of teacher cooperation (storytelling and scanning for ideas, aid and assistance, sharing, and joint work), ascribing a more significant developmental (i.e., learning) potential to the fourth category only, especially when this cooperation takes place through team teaching, joint planning, reciprocal class observations, joint action research, coaching, or mentoring. According to Little, teachers can jointly elaborate on their ideas and maximize their mutual influence and interdependence only in reciprocal cooperation. This claim is partly contradicted by the longitudinal research findings by Boyle, While, and Boyle (2004), who conclude that shared practice and simple observation of colleagues are key activities crucial to effective long-term teacher development.

Oldroyd (2005) offers another perspective on interactions and their benefits, claiming that there are *hard* and *soft* ways for management to establish and implement cooperation. With *hard* management, the task and the effort made to resolve it effectively structure the cooperation, while *soft* management is focused on the employees and embraces trust as the key value. In this type of management, emotions, commitments, and uncertainties are shared to a great extent. We appreciate the individual levels in Oldroyd's approach, and we used them to outline how the school environment provides context and background to intergenerational learning situations. Our interpretation of the data, which follows after the Methodology section, will focus on specific intergenerational learning situations taking place in this context, but then the school context will be revisited.

Methodology

The study presented in this paper is part of a broader research project mapping intergenerational learning across social environments. Methodology-wise, the project builds on the logic of a sequential mixed-methodology research design (Creswell & Clark, 2007; Bergman, 2008) performed in five steps, namely the theoretical phase, the qualitative phase, the quantitative phase, qualitative phase (case studies), and the summary phase. The project is now in its second, qualitative phase, the objective of which is to describe and explain intergenerational learning situations in schools. The unit of analysis is the intergenerational learning situation, which should enable a comprehensive approach to the phenomenon under study (Langová, 1992). This paper attempts to answer one of the lower-level research questions of the project: What forms do interactions in intergenerational learning situations take?

We assumed the primary data collection method would be "obser-view", i.e., the observation of behavior with a subsequent study of interpretations of the behavior by the participants through in-depth individual or group interviews (Kragelund, 2009). After the data collection was launched, this method proved not very feasible for practical reasons. After about sixteen hours of observations by the authors of this paper, only six full obser-views were completed (peer PC skills training; group reflection of a pupil accident; sharing experience using activation methods; a session focused on preparing a week-long school field trip; preparation of a school sports day; ordering school aids on the internet) where the intergenerational learning situation was both observed and then interpreted by the informants in the follow-up interviews. Observing entirely informal situations proved extremely difficult (perhaps partly because the field entry was mostly mediated by the headmasters).

In the interviews following the observations, the teachers were able to describe a considerably greater number of situations of intergenerational learning satisfactorily from the perspective of the researchers. It soon became evident that many of these situations were more or less unavailable for observation (e.g., teacher encounters beyond their working hours, email exchanges, memories of teacher inductions provided by teachers with more than thirty years of practice, etc.). This experience led us to replace observations with in-depth interviews, their structure reflecting the experience we gained through the observations and containing, among other things, self-classification in terms of teacher generations. This information was required for all colleagues mentioned in the interview. The observation method inspired us to cover individual learning situations in the reports by the participants.

This study is therefore based mainly on the analysis of data from in-depth interviews.⁵ The key characteristics of respondents and their school context are presented in Table 1. Schools where the data were collected were approached through the headmasters, to whom we explained the goals of the research. Cooperation on the part of the school was the first prerequisite for entering the school, as it was crucial for the relatively extensive data collection. Our selection of schools targeted schools where intergenerational learning was present in one form or another. Teaching staff of varying ages was a necessary selection criterion (we excluded a school when it became clear after the first contact that no member of the older generation of teachers worked there). Another favorable criterion was positive information about the application of a specific strategy in support of intergenerational learning. Within schools, respondents were selected based on observation so that teachers of different ages and experience involved in interactions with their colleagues could be included. If an intergenerational learning situation was identified, further participants were approached. The data was saturated at the level of interaction types; further data will be collected in future phases of the research project.

⁵ Besides the authors of this study, Barbora Hejná contributed to collecting the data, using it in her Bachelor's thesis called "Intergenerational learning between an inducing and induced teacher in primary school".

⁶ The table indicates membership of teacher generations by the following abbreviations: J – junior generation, YM – younger middle generation, OM – older middle generation, S – senior generation. The data was thoroughly anonymized; teachers' names were changed and schools were renamed with colors instead of their proper names.

Table 1
Sample population characteristics⁶

School	Formal basis for intergenerational cooperation	Range of cooperation in the school as reported by participants (Kasl, Marsick & Dechant, 1997)	Types of cooperation observed between participants (Little, 1990)	Representation among generations in the schools	Names of respondents and membership of generations
Secondary school (White)	Inducing teacher, deputy teacher, subject committees and formal class visits	Fragmented learning	story-telling and scanning for ideas, aid and assistance, sharing, and joint work	Across the range	Adam (S), Fany (MS),
Secondary school (Yellow)	No official strategy	Fragmented learning	story-telling and scanning for ideas, aid and assistance, sharing, and joint work	Massive rejuvenation of staff (older generation leaving, young teachers being hired)	Kamila (S), Marcela (OM)
Secondary school (Blue)	Institutionalized inducing teacher and formal class visits	Fragmented learning	story-telling and scanning for ideas, aid and assistance, sharing, and joint work	Across the range	Daniela (OM) Linda (YM)
Primary school (Green)	Institutionalized inducing teacher, formal class visits, peer training	Co-learning	story-telling and scanning for ideas, aid and assistance, sharing, and joint work	Junior and middle generations prevail	Blanka (YM), Cyrila (S), Ela (YM), Greta (J), Honza (YM), Irena (OM), Jirka (YM),
Primary school (Brown)	Institutionalized inducing teacher, headmaster approves educational plan and checks it is met through class visits, peer visits in class throughout the school year	Co-learning	story-telling and scanning for ideas, aid and assistance, sharing, and joint work	Across the range	Nikola (S), Pavla (J), Sylva (J), Tereza (OM), Ulrich (YM),
Primary school (Red)	No official strategy. Headmaster has added an experienced teacher past retirement age to the otherwise not very experienced teacher to support her colleagues.	Fragmented learning	aid and assistance, sharing	Junior generation prevails, middle and senior generation are represented	Walter (J), Vendula (S), Xénie (J), Zdeněk (OM)

As a part of our continuous analysis of data, we used the definition quoted in the first section to identify individual learning situations and made efforts to complement them with the perspectives of other participants through further interviews. We then classified these situations from various points of view, among which educator activity proved to be important⁷. This approach provided us with as many as thirteen categories, which we later reduced to seven, eliminating overlaps. A deeper study of the theory by Illeris led us to reflect on the extent to which these categories correspond to his proposed list of forms of interactions. Since the correspondences were significant, we decided to avoid proposing new terminology and stick to the concepts coined by Illeris. It was nevertheless clear from the beginning that the boundaries between the forms of interaction which were only roughly outlined in Illeris's theory would have to be specified or shifted so that the forms of interaction in intergenerational learning among teachers presented below described our sample as accurately as possible. Where our data diverge from the typology proposed by Illeris or a more detailed categorization is desirable, the analysis prioritizes our data. To make this shift as explicit as possible, a (nearly) full description of the category of interaction suggested by Illeris is attached to each of the categories we proposed.

Focusing on intergenerational learning, i.e., learning where both participants play an important role, we have somewhat altered even the conceptualization of *form of interaction*. Illeris worked with a broad understanding of interaction as interaction of the learner with the environment (see the *Learning, learning situations, learning interactions, and intergenerational learning* section); we have singled out the educator as a key element of this environment. Our view of the described forms of interaction is therefore based mainly on the course of the interaction between the learner and the educator and on whether these participants tend to be passive (are influenced by an activity coming from outside or have just become a part of a certain situation) or active (pursuing a specific activity in order to learn something or teach someone something), and on how this activity is shaped.

Forms of interaction in intergenerational learning among teachers

In defining the process of learning, we have stated that interaction is one of the dimensions co-shaping it. This means that by focusing on the forms of interaction mediating intergenerational learning among teachers, we can

⁷ We were inspired by educator typology developed in research in intergenerational learning in the family (see Rabušicová, Kamanová & Pevná, 2011).

better understand these interactions as such as well as the phenomenon of intergenerational learning itself. This chapter will therefore draw on data analysis in an attempt to classify the forms of interaction during intergenerational learning, to describe their specific features, to give some typical examples, and to outline what may prevent learning in specific cases.

The first form of interaction in intergenerational learning among teachers is relatively inconspicuous. Illeris (2007, p. 100) says about perception:

[It is the] simplest form, where the surrounding world comes to the individual as a totally unmediated sense impression. The individual is passive, but the impression encroaches and is registered – this can be most simply illustrated with a scent impression, which people rarely seek actively, but typically perceive when it imposes itself on them.

In our understanding, the condition for classifying an interaction as one of perception is not only that the learner is passive and does not actively seek out learning at the given moment, because the level of this passivity may vary (to use the example by Illeris, if one associates a certain place with a specific scent, the person is sensitized to the scent when visiting the place, and the scent may be among the motivations to return to the place). Moreover, the learner's activity within a specific interaction will increase as soon as the learner becomes aware of the stimulus and evaluates it as interesting.

Considering our approach to forms of interaction, it is of key importance for us that the educator is passive in the sense of not offering any purposeful learning stimuli to the learner. The educator's action has another purpose (such as to discipline noisy pupils in the corridor) and the educator need not be aware at all of being perceived by a colleague as belonging to another generation. In the following extract, Jirka, who is a younger generation teacher at Green school, speaks of opportunities for perception:

Each teacher is watching the other one very attentively. Those specific situations. There are one million and one hundred fifty of them in school every morning. Some teachers pretend that they are only looking after themselves but it's not true.

This, naturally, does not mean that each of these opportunities will become a learning situation. Teachers, in perceiving, assess situations as well as colleagues, and they select only some of the perceived situations for learning. There is often no reflected need to learn something new at the beginning of being captured in a specific situation; the need occurs only when the situation is consciously related to the learner's actual or planned behavior. This is how, for instance, Greta, a younger teacher, views processes that she observed with the older, experienced teacher Irena: "Well, I tell myself, this is not what I'd

do, I'd probably do something else – but there may be no harm doing it her way now and then.” Learning, in this case, starts with paying attention to a situation, becoming aware of a potential response, evaluating both alternatives (Irena's and Greta's own), and then accepting the existence of a valuable alternative, the latter being the change that confirms the situation as a learning one.

The forms of interaction between the educator and the learner present us with three types of *perception*. The interaction of the participants is most visible when the learner is a **direct witness to the specific situation**. Typical situations include the perception of a situation when a teacher is supervising pupils during an interval in the school corridor, during a school trip, and during other less formal situations when teachers have an opportunity to observe one another while interacting with pupils.

An example of the first type of perception was when Jirka, needed to discuss something with a senior teacher at the beginning of a class she was teaching. He followed her to the classroom and observed her giving instructions to the pupils. He reported on the situation in an interview:

I'm this kind of person, a serious person, so the colleague entered the class, and gave them clear instructions. I tend to give many instructions, to my class, well they're definitely hard-working ones, but I give them ten or twelve instructions, which they take down. She gives them three, four... I should give pupils fewer instructions, kind of.

This very short situation inspired Jirka to reflect on his work (the fact he is giving too many instructions) and, as suggested, he became aware of a valuable alternative (three or four instructions are enough), which was even expressed as a specific plan, “*to give fewer instructions*”.

The second type of perception

The educators have less contact when a **stimulus experienced face-to-face** is perceived. This occurs most frequently when teachers talk casually (and without a conscious learning objective) of their work, receiving learning stimuli. The partner in communication need not know that the situation is a learning one, unless made aware of it by the learner. Daniela, a member of the middle generation, says of her conversations with younger Linda:

I mention something among other stuff and she goes immediately: I want to write this down, can you repeat it for me? I say, come on, this is nothing to write down, it's just a silly thing, but she insists: no, wait a minute, what was it you were saying, I'm taking this down.

This description clearly shows that Daniela has no intention to teach; she is even dismissive of the value of the learning content. This reveals one of the reasons that perception-type learning situations may be very valuable – the learners themselves choose what is valuable from the vast amount of learning contents, and are not left at the mercy of what others chose as valuable, as the case is, for instance, with *transmission*.

The third form of perception

The partner we are learning from may be present only **in a mediated form**, through an object or an output such as a noticeboard with drawings and paintings, the results of a practical part of the school-leaving exam, a notebook, a teacher's note brought home by a child, or even a notepad a teacher finds in a box of old school materials years after leaving school. These situations may attract the learner's attention while walking along the school corridor and inspire that learner to opt for new processes or tasks or to reflect on their own work in depth. This was the case with Kamila, a member of the older generation, who came to see the results of the practical part of the school-leaving exam that pupils of her colleague Marcela (older middle generation) were taking:

The school-leaving exam, it left me speechless, the work was so perfect, made to perfection, honest work. It was as if the kids did it themselves, but I know how much invention of the teacher goes into this, and I know how great her input must have been. It was suddenly so much fresher than my pupils' work, definitely. I was kind of doing other things and suddenly I felt that compared to Marcela I was lagging behind. So this was an impulse to get back again, to at least that level.

Kamila, in this case, does not get inspiration regarding how to supervise school-leaving projects differently. She finds when comparing herself with her colleague that the level of her current work is not enough for her, and she uses this as an impulse to intensify her work efforts.

In *perception*, too, activity on the part of the learner may increase while the educational passivity of the educator remains the same. This is when the potential learner begins to feel respect for their colleague from a different generation, to value that colleague's ways of doing things, and to evaluate the colleague as beneficial to their own work. This sensitizes the learner to their colleague's activities, and the learner's readiness to turn an ordinary situation into a learning one is greater than with stimuli from other colleagues.

Stimuli for *perception* may even be purposefully sought by the learner in the long run, as with the novice teacher Cyrila, who learned from an older colleague in a rather unexpected way:

I was strongly influenced by a teacher who taught my son for three years, and I think she is an inspiration to me even today. Because she taught him in the first grade and I was teaching the first grade as well, so I was learning by leafing through his notebooks. I was a copycat.

This is how Cyrila, as a novice teacher, kept abreast of other teachers, learning how written information for the parents and communication with parents in general should look. Interactions of the *perception* type thus enabled Cyrila to learn from a colleague for whom she felt admiration, when she worried she might strike her son's teacher as inadequate.

Even more activity on the part of the learner is necessary when the learner initiates the opportunity to *perceive*. This may be, for instance, when a teacher asks a colleague to be allowed to visit their class, as described by Irena:

There was a colleague who has since left the school who kept visiting my classes. As soon as she had a vacancy in her timetable, she was sitting in my class. And now that she is teaching at another school, she says that she is using stuff she learned from me.

To classify this learning situation as *perception*, it is important that although the older middle generation teacher Irena was naturally aware that her young colleague was sitting in her class, Irena's activity was not primarily focused on her. The learning contents from the class that was observed were selected by the young colleague. Although the two latter situations used as examples occurred between participants whose relationship was positive (the first relationship later became continuous cooperation and friendship; in the second relationship, the contact lasted even after the younger teacher left the school), *perception* is largely invisible, taking place even between teachers who do not feel close to each other, who may, in fact, hardly know each other, or who may even feel antipathy towards each other.

Interactions of the *perception* type may therefore be regarded as a potential bridge between generations when interpersonal or organizational structures do not encourage more visible forms of interaction. This is how teachers can learn what they need to learn without "making a nuisance of themselves" (Fany) or without communicating that their colleague is doing something well or even better than themselves.

Transmission

While *perception* is not intended by the educator, with *transmission* it is primarily the educator who decides to transmit something to their partner who is active. This is the type of interaction where our revision of Illeris (2007, p. 100) is minimal:

“This aspect of interaction typically involves someone from outside having an interest to some degree or other in passing on something to others, or in influencing someone, in transmitting specific sense impressions or messages either generally or specific to others. The receiver can be more or less interested in the transmission in question, and accordingly will be more or less active in relation to it.”

There are naturally a great number of situations in schools which seem to fit this format but in which no learning occurs because the person targeted by the stimulus does not regard it as beneficial enough to make it a content to learn. One example may be, for instance, the PC skills training by a colleague from the younger middle generation (Blanka) that teachers had to attend late in the afternoon, after teaching seven classes and sitting in a meeting. The teachers described the situation as follows:

Interviewer: *And what did this training look like?*

Cyrla (older generation): *We are staring at the screens while she is speaking. That’s all there is. There is nothing to observe.*

Irena (older middle generation): *Except our enthusiastic faces [everybody laughing].*

The reports of the situation, which is regarded as important by the educator (Blanka, who is initiating projects encouraging ICT development in the school), reveal the attitude of the intended learners – “*staring at the screens*” – as passive, and the ironic “*enthusiastic faces*” statement characterizes their attitude to the learning opportunity. That this attitude to the situation is shared across the respondent group (and perhaps even by other colleagues) is confirmed by the laughter with which they respond to the irony of “*enthusiastic faces*”.

A *transmission* learning offer may be rejected due to the situation (temporal framework, doubts about the usefulness of communicated content, involuntariness, etc.) or the relationship between the participants. This may concern a formal aspect (advice from the headmaster is perceived differently from advice offered by a colleague), a personal aspect (degree of antipathy or positive feelings), or professional respect. The latter characteristic is closely connected to the intergenerational aspect. Teachers from our sample

population spontaneously mentioned experience as the criterion crucial to whether they were willing to accept advice. The attitude was quite radically expressed by Jirka:

“When a teacher comes – and I don’t want to offend anyone – when a teacher comes who is in the role of a deputy headmaster and he has eight years of teaching experience, which is the same that I have, I somehow don’t see the point of him giving me advice on what to do differently.”

Not only the learner but also the educator may be skeptical of the situation. This happens especially when the educator passes on advice mainly to fulfill their role (deputy headmaster, inducing teacher) or just because they cannot stop it, but the educator may be doubtful even during the interaction that the attempt is going to lead to a learning situation.

This is how, for instance, Cyrila experienced attempts at *transmission* targeting a teacher she was inducing:

I was also inducing a girl, she was a very nice person, a good-looking lady [...]. I was trying to help her. But you cannot impose yourself where there is no interest. What I said was in vain. And it ended up in April with the class being totally messed up and the parents dissatisfied, and a psychologist had to step in then. The climate in the class was under examination, it was a really bad situation.

Cyrila observed the process of the class getting “*messed up*” but because her attempts at *transmission* repeatedly got no response (from September through April), she was not able to prevent this destructive process.

There are, on the other hand, instances when *transmission* is received enthusiastically, as Daniela described in the attitude of her colleague: “*She is like a sponge, she sucks up all the nonsense I say.*” It is often this “sponge-like” attitude to interactions at the level of *transmission* that grows into long-lasting relations between teachers and provides a basis for deeper and more permanent (often years-long) forms of intergenerational relations and cooperation which may later manifest in a variety of forms of interaction.

The fact that an **offer is unsolicited** need not mean that it will therefore be assessed as undesirable by the receiver. Unsolicited but accepted *transmissions* include a whole range of instructions flowing from superiors to inferiors, concerning e.g., bureaucracy or prescribed (or proven) procedures for dealing with crisis situations. A series of unsolicited but appreciated *transmissions* may form a great part of the relation between an inducing and an induced teacher. Nikola, for instance, summarizes the information she needs to provide for an induced teacher during the week in August before school starts, her very first week in the new job:

You meet her the very first week before school starts in September, you meet her here every day and you have to tell her things, mostly regarding the documents, yes. All the kinds of information you need to fill in the documents, all those things, yeah. What she must not forget about, where to write the stuff, you are showing her everything. What the catalog sheets are for, what the school schedule looks like, the classification journal, how to put together records. Everything, how the whole system works, what she needs to know about teachers' conferences, what is whose responsibility, how contests are distributed among teachers, all kinds of things.

Another type of *transmissions* are those in which **the learning situation is initiated by the person wishing or needing to learn**. Irena says: *Once a colleague approached me with the question of what methodology she should use to teach kids how to divide one two-digit number by another, so I told her what I do [...] and she said it helped her a lot.*

These situations are often triggered by a specific person and the triggering stimulus is often repeated (provided the situation is assessed as beneficial). In this way, teachers create a dense or less dense network of types of questions or issues they take to this or that colleague. The network need not imitate formal structures.

In describing situations when *transmission* arises, it would be misleading to mention only situations concerning clear-cut instructions or guidance. *Transmissions* may also involve more complex strategies for surviving at the school despite complicated interpersonal relations, dealing with conflicts with a specific person, etc. To illustrate this, Greta (younger middle generation) had Irena (older middle generation) explain how to cope with the complicated relations within the school. Irena describes the situation:

There are problems with relations here in the long run. I found a way to deal with it for myself. [...] I have a colleague who asked me about it [...] so I told her what my solution was, and she contemplated that and now she is finding it effective. But there have been colleagues, a number of them in recent years, who were not willing to deal with it, didn't want to face it, and they left.

We may therefore conclude that for a potential *transmission* to be taken advantage of, not only the content but also the relationship between the two participants is important. The ideal situation supporting the educator's willingness to transmit is the "sponge-like" attitude on the part of the learner while the amount of relevant experience and the authority of the educator is of key importance in order for the opportunity to learn to be taken advantage of.

Experience

Illeris deals with the relatively ambiguous concept of *experience* in the following way: Experience presupposes a particular activity, i.e., that the learner is not simply receiving, but also acts in order to benefit from the interaction. (p. 100) Experience has important elements of content and knowledge, i.e., we acquire or understand something that we perceive to be important for ourselves. Experience also has a considerable incentive element, i.e., we are committed motivationally and emotionally to the learning taking place. And finally, experience has an important social and societal element, i.e., we learn something that is not only of significance to us personally, but something that also concerns the relationship between ourselves and the world we live in. (p. 125–126).

The part of this definition of *experience* that we are using for intergenerational learning among teachers is that the learner is not a passive recipient but enters the interaction through an activity of their own. The fact that the learner is doing something at a point in time provides a starting point for specifying the learning content. The content is usually selected by the educator based on receiving the activity by the learner. The situation goes on similarly as in *transmission*, i.e., the specific content is passed on to the learner (this phase might also be referred to as reflection – see, e.g., Nehyba & Lazarová, 2014). *Experience* is nevertheless considerably different from *transmission* by virtue of the learner's greater involvement in the learning situation, both emotionally and motivationally, as Illeris has it, since the content is not general, but is linked to the learner and their past actions and nearly always includes an evaluative component.

What are the situations from which *experience* springs in intergenerational learning among teachers? There are, certainly, class visits, but it is notable that although the situation follows the action–reflection scenario, it is possible that learning may not occur. Teachers, for instance, like to quote the kind of “advice” they receive after a visit paid to their class, which was – to their minds – entirely inappropriate, or was offered by a person who was formally entitled or obliged to pay the visit to their class but was regarded by the teacher as methodologically incompetent. Visits by a headmaster or a deputy headmaster who teach entirely different subjects or age groups provide typical examples. Skepticism about a learning interaction need not be felt only by the learning participant; it may also be present on the part of the educator. Educators may often doubt whether the content will be received well even before transmitting the information – which is why they may be somewhat careless formulating the content, as a teacher of the older middle generation describes the situation after visiting a class by her younger colleague Daniel: “I told him straight away: I just told him, I was bored to death.” This interaction was

“played hard”, simply because it was formally required and it is clear that neither of the participants sought this kind of situation.

This resistance to class visits may be unintentionally encouraged by school management, as is the case with Adam, the headmaster: *“There is, for instance, the unwritten rule that a novice teacher enjoys some protection during their first year, that you do not pay visits to their class.”* This attitude, which is perceived as being nice to the novice colleague, suggests the headmaster does not regard class visits as a means to support teaching quality but as a control mechanism the teacher is to “prove themselves” against.

Class visits may naturally also be followed by observations which may lead to a change in the teacher. The most frequently reported observations include advice regarding rearranging the class, communication with pupils (addressing them by their surnames, speaking up, focusing on a particular group of pupils, etc.), teaching priorities (using notepads or textbooks) or factual remarks concerning specific learning contents and their didactics.

Although teachers usually remember visits paid to their classes well, *experience* is even more intensive when the situation is longer and/or poses a kind of threat to the teacher. Examples include situations when the teacher is at the center of a conflict (with pupils, parents or colleagues) which requires an intergenerational consultation or a series of such consultations to solve. Irena recalls such a situation from her novice years:

There was a little girl who was a problem case, I was going to fail her, and then we had an important meeting with her parents where she [Irena’s inducing teacher] explained everything to them, that I was a qualified teacher and so on. And afterward, she told me that I should have let the parents know very soon, when she started failing. She was failing but I should have said: “Please note the poor results of your daughter; I am kindly asking you to supervise her closely.” She told me I should have approached them in this way, in order for them to know that this was how I saw the situation, that it was rather alarming. And me, as an inexperienced teacher I thought that there was no solution, with her getting the worst grades. But the parents then attacked me because I was going to let her fail the class without having told them in advance. I have been sticking to the rule since then and I am finding this useful; it often helps the child. And I can always claim I have done this. She helped me a lot at that time, and I have been following the recipe since then.

In this situation, Irena, as an “*inexperienced teacher*”, did not provide the child’s parents with enough information. A number of conflicts involving the parents escalated the emotional charge of the situation, which was confirmed by the feedback from the inducing teacher. Irena nevertheless profited from this *experience* by changing her behavior in such situations (“*I have been sticking to the rule since then*”).

There is an even more complex type of intergenerational *experience*: situations when a specific action involves several people across generations, the group then assessing the situation and looking for an optimum way of dealing with similar situations in the future. We witnessed such a situation, for instance, in a meeting during which teachers discussed in retrospect the physical breakdown of a female pupil during an event involving the whole school. Procedures applied to deal with the situation were reviewed and assessed (who called an ambulance and when, who, when and how the parents were contacted, how the other pupils were managed during the accident) and specific preventive measures were agreed on, to be followed during similar events across the school.

Experience as a type of intergenerational interaction is associated with opportunities and limitations similar to those connected with *transmission*, but the strong emotional charge typical of *experience* poses an even greater risk that the offered contents will not be learned. This is probably why in our sample population instances of *experience* rooted in relations with a strong “soft” component were especially assessed as very useful, e.g., observing an activity by a colleague and visiting a colleague’s class were perceived as natural, and the feedback given was not perceived as threatening or incompetent.

Imitation

Another form of interaction is *imitation*, in which, as Illeris reports, “the learner attempts to do something in the same way as another person acting as a model or, in a more goal-directed form, as an instructor” (p. 100). In *experience*, the learner performs an activity on the basis of which a learning content is selected, usually by the person in the educator role; in *imitation*, the content of change is known to the learner already during the activity as such, with the activity consciously following a model. The educator/role-model is often actively involved in making the imitation as successful as possible.

This kind of interaction may take basically one of two forms. The first form is *imitation* where the activity of the teacher role-model comes first. The learner’s attention is drawn by something they perceive (whether the learner is a direct witness or learns about the situation in a mediated way) and the learner then pursues a **follow-up activity** to imitate the model situation.

This is illustrated by Ela’s experience seeing a younger colleague structure her classes in a novel way:

The teacher [...] began to use activity centers in class. So I was able to try out quite a lot of things based on what she told me about how they worked [...] I was interested from the very beginning, only I never had an opportunity to go and see it because I was teaching, so I always went to take a look during the break.

In this case, Ela first observes the method of work her colleague learned about at a seminar (*perception* level). She is so intrigued that she uses her breaks to see the alternative classroom organization, to discuss specific assignments with her colleague, and to find the details she needs to organize the activity centers herself.

The second form of *imitation* is when a teacher (upon mutual agreement) accepts an existing procedure used by another teacher who serves as a role model for **joint or parallel work**. This is relatively common e.g., when several teachers teach the same subject to parallel classes and they are evaluating the pupils, with one teacher (usually of the younger generation) taking over what has proven to work well, as in Honza's case:

Like we were harmonizing tests used at the end of the semester. My idea of what the written exam should include was somewhat different – and hers was different and based on her teaching practice of ten years. But I trusted she was right, and I am finding now anyway that she was right.

In this case, Honza abandoned his ideas on designing end-of-term written exams and followed the way established by his more experienced colleague. He accepted the new way and learned what was needed to use it, i.e., a change occurred in him, but it took him several years to fully appreciate the meaning of this change. We may assume that had there been no pressure to “harmonize” the tests, using comparable tests in parallel classes, and had Honza assessed what his experienced colleague was doing only at the level of *perception*, the change may not have occurred. The external pressure for exam comparability, combined with his trust in his colleague's experience, led to his accepting the desirable content through *imitation*.

Imitation may concern the entire teaching concept, beyond isolated moments of instruction. An experienced teacher named Kamila described this situation when she was teaching practice-oriented classes in a specialized subject alongside Marcela (a novice teacher), a member of the younger generation:

In the beginning, it was her wish to do the tasks together, because the class was split into two groups then, and I already had a class agenda that I had tested and found good and she more or less took over what I was doing, and we taught this, each of us in our own class.

This parallel way of using *imitation* is then adjusted and harmonized by both participants; both participants are active in this type of interaction but the learner remains evident.

It is typical of *imitation* that where it concerns other than mechanical activities (such as dealing with the class register), it is often associated with

a relatively great deal of trust in the educator's experience on the part of the learner; the preconditions for the educator are openness and willingness to share "their own" ways of doing things which they often had to work hard to master. If these two attitudes match each other, *imitation* often concerns more than one activity: the educator finds satisfaction in perceiving they have found a successor, as was the case with Kamila (older generation) and Marcela (older middle generation). Nikola describes another situation:

And there is Pavla with whom I have a great relationship, because I told her, after like one year, that I can see her as my successor when the time comes. Because she is so enthusiastic and I have no reservations about passing everything that I have accumulated on to her.

This account, which is full of emotions, shows how important "having a successor" may be for a senior teacher. It gives meaning to "*everything that I have accumulated*": it will not be lost when the senior teacher retires but will go on serving its purpose. "*Everything that I have accumulated*" is not just specific teaching materials, but also series of steps to be taken, attitude to work, etc.

When the relationship between the participants is this good, specific professional skills as well as a number of (sometimes unreflected) processes and habits, including characteristic expressions and gestures, are transmitted by this form of interaction.

Participation

Participation is close to *imitation*, but the forms of interaction differ in that in *participation* the action is more profoundly influenced by the learner. Illeris says of this form that it "...is characterized by the fact that the learner is in a common goal-directed activity [...] in which the person concerned has a recognized position and thus also an influence." (p. 101)

In some of the forms we describe, this influence may be so important that it is difficult to identify which of the two participants is the educator and which is the learner – this is determined only by asking follow-up questions. The following paragraphs will present three forms of *participation* we noted in researching intergenerational learning among teachers:

Participation as help. With this type of *participation*, it is usually evident who is teaching whom. The learner is invited to participate in an activity which is already established and it is up to the new participant to learn some procedures first (perhaps by *imitation*) and then expand them and mark them with their individual approach. *Participation as help* is very often used to transmit a complex activity pursued by the school or give it a staff boost.

A teacher named Ela, who is about to leave the school, gets some help in preparing the Easter Workshop, in order to have the tradition continued. Elsewhere, this type of participation is a proven way to “train” class teachers. Adam, the headmaster, explains:

And then the teacher, for instance the class teacher, chooses another teacher, even from among the young ones, to be the deputy class teacher. And the class teacher guides the deputy, so that the young teacher learns to communicate with the kids better, like during the adaptation course [...].

This type of participation is most reminiscent of the relation between an apprentice and his master. The apprentice moves about in the same space, watching the master, helping first with marginal tasks and then, as the apprentice improves, getting increasingly demanding tasks.

Another type of participation – **participation as rehearsal** – arises when teachers swap roles even though it is clear who is more experienced in the relevant skills. Greta, a younger teacher, recalls how they prepared for the School Out of School Week she was organizing with older teacher Cyrila inducing her:

She told me: You know, I thought it would be good for you to learn this, I've been doing it for years. This is the documentation. I can find whatever you need for you. I told her to give me an overview, and she prepared an overview. And then she tells me – there are the regulations upstairs in the Staff Room, that document includes everything you need to find out. So I went to the Staff Room, took the regulations and made notes about what documents were missing. I kept approaching her – can you tell me how detailed I need to be about this, is this OK – or not. Then we discussed the menus. And the teacher wrote them up, I just typed them into the computer. So it wasn't that she left it all up to me. We were doing it together but it's me who takes care of the paperwork and is reporting to the management.

In this case, the senior teacher does not opt for *transmission* – she does not give the younger colleague instructions, being done with the thing. She, on the contrary, remains in a cooperating role but leaves scope for component activities to her young colleague – even though taking the attitude “I will do it myself again” might be equally or more effective for the senior teacher. In this situation, the educator role is characterized by consciously taking a position in the background, without giving up responsibility for the joint work (giving instructions, monitoring the individual stages of work, and performing smaller tasks – such as drafting the menus for the week – when necessary).

Finally, a third type of *participation* is **participation as cooperation of equals**. This type of cooperation most frequently occurs within one generation. Where we encountered this type of cooperation across generations, it was as a part of a long-term relationship where both participants matured into this type of interaction through other interactions.

If this is the case, the cooperation makes both participants happy, and it is a long-term cooperation with characteristic “soft” features. This is how, for instance, two teachers (Daniela and Linda), once an inducing–induced teacher pair who are now teaching at different schools, used to prepare workshop activities for their pupils. Each of them now has their area of expertise (creative writing, arts) that she is in charge of and the rest is prepared by consensus. Each teacher first prepares a draft of activities and then they finalize the agenda in friendly joint sessions (which they evaluate very positively in terms of benefiting each other).

Participation, especially *participation as help* and *participation as rehearsal*, often occur in response to external obligations, even though the choice of a specific learning partner may often be at least partly up to the educator (e.g., a teacher delegating the organization of the Easter Workshop chooses the teacher, a class teacher chooses their successor, etc.). These levels of *participation* may rely on hard or soft occupational relations, and may serve as an initiation into or impulse for a long-term relationship with a significant personal dimension.

This dimension tends to be the strongest with *participation as cooperation of equals*. This form of interaction is usually preceded by forms in which one of the participants dominates. When *participation as cooperation of equals* starts to emerge in the relationship, this may be viewed as a sign of a mutually beneficial relationship beyond any formal structures – it, on the contrary, tends to create conditions to further develop. An example to illustrate this may be the work-related meetings of teachers who are currently teaching at different schools, some of whom may have even retired but keep creating, often on a voluntary basis, opportunities for mutually enriching cooperation.

Participation as cooperation of equals concludes the list of forms of interaction that intergenerational learning situations among teachers may take. The following section will focus on relating this overview to the school context, and seeing whether and how it can be useful to us in reflecting on intergenerational learning in this institution.

Searching for intergenerational learning among teachers: what the interaction analysis perspective revealed

In the section discussing school as the context for intergenerational learning interactions, we outlined three levels at which to study learning interactions among teachers: the embeddedness in formal structures, the degree of teacher involvement, and the depth of this involvement (Verbiest, 2011). Having described intergenerational learning interactions as reflected in our data, we will attempt to use these levels to structure the answer to the question of what the learning interactions we have described can reveal about intergenerational learning among teachers and its study⁸.

As for the formal grounding of this phenomenon, our data allow us to say that none of the formal structures described in the section titled “School as context for intergenerational learning situations among teachers” can guarantee that intergenerational learning situations will occur, let alone indicate which type of interaction a specific managerial decision will lead to. In the situation when two teachers of different generations, Cyrila (older generation) and Greta (younger generation) were preparing a School Out of School Week together, the task could certainly have been accomplished using any of the forms of interaction without jeopardizing the event as such, and learning may have taken place to various degrees at each level of interaction. Cyrila could have done the job herself, leaving Greta to learn whatever she thinks appropriate (*participation*); she could have explained to her how things are done (*transmission*) and then done the job herself; she could have left a specific part of the preparation up to her, giving her no detailed instructions and then reflect on the situation with her (*experience*); she could have first let Greta accompany her on the trip, let her see how she was doing things, and leave the preparation up to her the following year (which would probably lead to *imitation*). Each of these learning interactions would probably have a slightly different learning effect. And, finally, the senior teacher could have kept her leading role regarding bureaucracy and charged her young colleague with preparing the program, which might have been more efficient at the given moment for both of them but the situation would be rather devoid of intergenerational learning.

⁸ Verbiest conceived his text as a theoretical description as well as a potential tool to use to analyse specific organizations with a view to their development. His view of how the individual levels of learning may be characterized transpires even from his applicational contribution.

This brings us to the conclusion that the situation binding colleagues belonging to different generations with a joint task does not itself induce learning. This concerns the forms we assumed to be favorable to intergenerational learning prior to entering the field (inducing and induced teacher, parallel classes, subject committees, and projects with teachers of several generations cooperating).

More or less the only way of effectively encouraging intergenerational learning on the part of school management that was found in our sample population (Red school and Yellow school) was when the introduction of a certain measure to support intergenerational learning in a specific and intentional way was accompanied by “soft” strategies, including appreciating the roles of the individual participants. These processes were connected with assessing not job performance (i.e., for instance, how the School Out of School Week turned out) but specific learning processes.

To give an example, the headmaster at the school where Nikola teaches associates the institution of the inducing teacher with a great deal of prestige while making sure the process will be assessed. Nikola (inducing teacher, older generation) describes the result of these processes:

On the one hand, you are happy you have been entrusted with inducing someone. On the other hand, it is a tremendous burden, extra work. Because it is a year-long task. And you cannot be careless because the headmaster asks questions, and when visiting the young teacher's class, he can see what she can do and what she cannot do. And when she cannot do or is not good at something, he comes to you to ask you why you haven't explained it to her, why you haven't taught her. OK, sometimes you may defend yourself that she is not interested, not willing. But you mostly need to provide some evidence. So you keep records, you keep making notes on what, when and what day, you talked about. What you did when you paid a visit to her class.

The “hard” measures include the institution of inducing teachers as such (our further data show that it needs to be remunerated financially – albeit moderately), together with “soft” trust. Assessment then consists of visits to the classes of the induced teacher, feedback provided for the inducing teacher, and even (beyond the passage quoted) questions about the induction process posed by the headmaster to the induced teacher.

Another measure was extending the teaching staff at the Red school. The headmaster, Zdeněk, intentionally hired senior teacher Vendula (past retirement age), giving her a half-load, to make up for the dominance of junior teachers in a specific subject committee. He commented on his managerial decision as follows: “*She keeps an eye on them, explains things to them...*” That the strategy is successful is clear from what Vendula says:

Well, it is nice being among the young ones. They received me warmly, keep coming to ask questions, to seek advice, especially concerning experiments, yes. Or about how to examine or I don't know, about any kind of problem, they come to me, they are not ashamed. Or they take advantage of the opportunity.

Vendula's readiness to give advice regarding specific didactic issues is complemented by operational tasks given to her by the headmaster to make sure her experience gets transferred. Another report by Vendula on such a task:

Then we were asked by the headmaster (he wanted to take advantage of me still being there, and I appreciate that) to order some aids for the laboratory and some chemicals, so I went to Brno with another colleague, in our leisure time. She accompanied me, we ordered the things there, and then we ordered some more stuff online.

Vendula's account shows that the headmaster wants Vendula to deal with a specific problem (buy the chemicals) and wants the younger colleague to deal with this situation with her – this is why they went to Brno and ordered items online together.

In order to understand intergenerational learning at schools it is not enough to research solely formal structures present at given schools. Rather, it is necessary to focus on the nature and merit of specific interactions between teachers. School management has repeatedly been a poor source of information regarding how widespread intergenerational learning situations are in a school, as some instances (White, Blue, Green school) that the school management indicated as model forms of intergenerational cooperation among teachers were in reality not functional (e.g., the inducing teacher named Fany *is* recognized as an expert in her area, but she is rather trying to minimize contacts; a closer study of a subject committee regarded as very active by the management revealed that the members communicated only via email, to complete an overview for the headmaster; etc.). It may well be the case that not even teachers themselves know how widespread intergenerational learning situations in the school are (for instance, Ela feels isolated after several close colleagues have left and she evaluates intergenerational learning interactions in the school considerably less enthusiastically than her colleagues). Ultimately, our description of forms of interaction of intergenerational learning show that even teachers themselves may not be aware of the extent to which their colleagues are learning from them – obviously not within *perception* learning interactions. The inconspicuousness of *perception* may be misleading, as an individual may become a valuable source of learning without even knowing it, and this may be the reason senior teachers feel their younger colleagues are not very interested in obtaining experience from them (see Lazarová et al., 2011). This, of course, concerns not only senior teachers.

We believe that to find how widespread or scarce intergenerational learning in a particular school is, due to the “invisibility” of this phenomenon, we must approach learners with questions and study how they have identified learning situations.

As for **depth of interactions**, i.e., the degree to which an individual is involved in intergenerational learning situations, we must conclude that our interaction-oriented perspective does not allow us to believe that any type of interaction is associated with less valuable contents and is thus less important than other types (cf. Little, 1990). We did mention while discussing some forms of interaction that they tend to precede other interactions, but this concerns the temporal sequence in which specific interactions occur within the developing relationship of two participants. Each form of interaction requires a different degree of mutual knowledge, trust, communication, etc., and brings a differing amount of mutual satisfaction (in this sense, we might speak of *perception* being lower in the hierarchy than *participation as cooperation of equals*). From the perspective of developing intergenerational relations, however, all forms of interaction play an important role, and even when no long-lasting relationship is established between specific teachers, each form of interaction may provide marginal information (i.e., the recommendation to read a specific book during *participation*) and even relatively deep self-reflection (i.e., Kamila’s exposure to the school-leaving projects of her colleague’s students). We can, however, claim that in our sample population, cooperation at the level of *participation as cooperation between equals* did not occur when the interaction between teachers was random or exceptional. Random and exceptional relations among teachers tend to attract rather interactions of the *perception* type, and there are fewer interactions in areas promising *transmission, imitation, and experience*.

The more informal and voluntary relationships between participants also include a “soft” strain, i.e., they involve psychological support and personal understanding (Oldroyd, 2005), the share of reflected learning situations is bigger, which may be due to the amount of contact, and individual forms of interaction occur in richer patterns.

We might use this as a basis for concluding that the depth of learning interactions is closely associated with the stability and intensity of intergenerational relations occurring in the workplace, and hence the personal meaning that the participants attribute to these relations. Although this hypothesis requires thorough empirical testing, we believe that if it proves valid, it could provide a basis for assessing conditions for intergenerational learning in a specific school.

This overview may make us view intergenerational learning interactions as an (often only anticipated) undercurrent of school life. We believe that if teachers perceive intergenerational interactions as valuable at a personal level,

formal structures may support intergenerational interactions and valuable learning situations may occur, whether it is on the basis of soft or hard cooperation. Nevertheless, where the cooperation assumes a personal dimension, learning situations tend to get denser and grow into a long-lasting mutually enriching relationship. If formal conditions for such interactions in school are missing or are established without regard for the personal closeness of participants, intergenerational learning tends to burst out beyond these structures or even despite them.

Conclusion

We have defined intergenerational learning in school as a process within which, based on interactions between teachers perceiving themselves as members of different teacher generations, a permanent change occurs in at least one of the participants who is able to reflect this. We have attempted to grasp this process through a specific methodology, focusing our analysis here on one dimension of learning only – interactions. Each of these decisions involved certain limitations which we would like to discuss now at least briefly.

The nature of our definition implied excluding unreflected and unconscious phenomena. The scale of learning at this level is nevertheless likely to be just as rich as the one concerning reflected learning situations. Identifying these processes, delimiting them clearly, and finding a way to prove the influence of the intergenerational aspect are however serious problems which will have to be addressed in the future.

The methodology we used also involved certain limitations. We have already explained why the data we presented here were obtained largely through in-depth interviews. We nevertheless believe that where we identified rather long-lasting intergenerational learning relations and a greater interaction density, we could, provided the respondents are willing to cooperate, go back to the level of observing interactions, or to the observe-view method. This might provide one way to get closer to unreflected learning as well.

Another self-imposed limitation of our approach was limiting ourselves to interactions. Our thinking regarding intergenerational learning among teachers centered around interactions such as induction, mentoring, class visits, etc. in the beginning – all pair interactions. This was an aspect we focused on in our analysis, and also an aspect shaping our definition of forms of interaction based on the actions of two participants – the learner and the educator. Consistent with theories of groups learning in organizations (see, e.g., Crossan, Lane & White, 1999; Lam, 2000; Brown & Duguid, 1991;

Argyris, 1993), we may suggest that intergenerational learning interactions occur not only at an inter-individual level but also at the level of school as an organization or at the level of individual groupings existing within the school. This widens the scope for further research – attempting to answer questions such as how intergenerational learning at the level of organization and group works, what role these processes play in school life, and, naturally, what the relation of these processes to the specific inter-individual situations we described is.

Finally, we would like to mention that the goal set out at the beginning of this paper – to describe forms of interaction in intergenerational learning among teachers – led us to disregard the two remaining dimensions of the process of learning – incentive and content – although we kept reminding ourselves of the interconnectedness of the three dimensions (Illeris, 2007) which makes it virtually impossible to write of one without considering the remaining two. For this reason, we have touched upon the attitudes of the individual participants to the situations and their mutual relations now and then, topics discussed under *incentive*. We were often not able to fully abstract our discussion from *content*, as the individual learning situations are hard to imagine without it, and, moreover, separating them would rob us of the opportunity to show that the individual forms of interaction are associated with different kinds of contents. We regard both these dimensions of intergenerational learning as so important as to address them in our future work, at the level of description as here, as well as by attempting to explain how the individual kinds or forms of contents, incentive, and interactions are related.

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