

# Subjective Conception of Students' Self-Regulated Learning from the Perspective of a Beginner Teacher

Karla Hrbáčková<sup>1</sup> & Soňa Vávrová<sup>1</sup>

<sup>1</sup> Tomas Bata University in Zlín, Zlín, Czech Republic

Correspondence: Karla Hrbáčková, Faculty of Humanities, Tomas Bata University in Zlín, nám. T. G. Masaryka 5555, 76001 Zlín, Czech Republic. E-mail: hrbackova@fhs.utb.cz

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## Abstract

The authors of the paper contemplate changes in contemporary society and their impact on the culture of education. In accordance with Leirman the authors see a shift in current education from a culture of experts and prophets to a more practical engineering and communicator culture. Along with Keller and Tvrdý they do not view the shift as a decline but rather as a transition from heroism to practicality. Following the selected theoretical foundation the paper focuses on what the teacher's conception of students' self-regulated learning is and whether there are particular differences in the conception of teaching in novice teachers and teachers with teaching experience. The aim of the survey is to map the existing, statistically significant differences in beliefs of beginning and practicing teachers on selected areas of teaching, namely the content of teaching, interaction with the student, the methods of teaching and evaluation of the student.

**Keywords:** teacher, teaching and learning, self-regulated learning, constructivist approach

## 1. Introduction

The teaching profession is subjected to new specific requirements in today's information society, which is sometimes referred to as the post-industrial, postmodern or network society. The teachers, who were regarded as the only source of expert and relevant information at the end of the 20<sup>th</sup> century, i.e. not so long time ago, now compete for students' attention with newer, faster and more modern media, especially electronic mass media such as television and the Internet. The role of the teacher shifts from being an information provider to the role of a guide who provides students with the knowledge of today's world. Such social changes are also flexibly reflected in the ongoing curricular reform. In this context, education gradually shifts from the traditional concept of teaching to the constructivist concept where learning is seen as an active, constructive and self-regulatory process in which the students abandon the traditional role of passive receivers of information and become active participants in the learning process, during which they transform their existing thought patterns (preconceptions) based on active acquisition of new knowledge. *"Previously, pedagogical communication between teachers and students was based solely on locality. Nowadays, however, physical proximity and personal meeting in a fixed time is not a necessary prerequisite for the educational process. Today, students need not draw on knowledge based on mutual presence, i.e. is on personal familiarity with others in certain situations..."* (Vávrová, 2009, p. 122). The teaching process takes new forms among which we should mention e-learning, teaching via computer technology through the use of computer networks and the Internet, and m-learning or mobile learning using new generations of mobile phones and computers. Teaching thus takes place in various fixed places in the network but also happens in motion (e.g., while travelling). *"The connection is ubiquitous, with the place in cyberspace being constantly in motion."* (Vávrová, 2009, p. 123).

New trends in education put new demands on teachers and the learning culture. Walter Leirman (1996) developed a typology of four cultures that are the components of the educational process and are always present in varying proportions. He distinguishes the culture of experts, engineers, prophets and communicators. The culture of experts is closer to the prophetic culture and their common base is transmitting of universal truths through school

where the teacher "...acts as a spiritual leader who provides his/her listeners with enlightenment without which they would remain unenlightened..."(Keller, Tvrđý, 2008, p. 40). The authors believe these two types of culture dominate in the traditional ways of teaching. Unlike the traditional concepts, however, in the constructivist concept the domineering culture is the engineering one. Its aim is not to convey the utmost truths but rather promote their practical orientation and usability of the acquired knowledge in practice. The communicator culture seeks to "...improve the skills that enable people to solve problems in a friendly dialogue with others..."(Keller, Tvrđý, 2008, p. 40). With the rising massification of education Keller and Tvrđý (2008) notice certain impracticality of expert and prophetic cultures. They point out the onset of technically-oriented engineering culture and practical communicator culture.

Despite the newly established trend we hold a strong and reasoned belief that in many Czech schools the traditional method of teaching through asymmetrical communication between the teacher and the student, where the teacher is given more space than the student, is still dominant (Janík et al., 2009). The traditional way of teaching uses the elements of expert and prophet culture and suppresses the elements of communicator and engineering culture. The approach mentioned above contributes to lowering the student's activity and involvement, which negatively affects the development of the student's level of self-regulated learning. With regard to the facts presented, the research study focused on obtaining an insight into the subjective theories of education designed to promote the development of student self-regulated learning from the point of view of beginner teachers. The study also aimed to compare their views, attitudes and approaches to experienced teachers actively engaged in the teaching profession.

The research objective was to look into the teacher's conception of self-regulated learning in students and whether there are differences in the sub-concepts of teaching between beginner teachers and teachers with teaching experience (i.e. in their opinions on the degree of self-regulation of particular areas, i.e. curricular content, interaction with the student, teaching methods and student evaluation). The results obtained will then be taken into account in the training of future teachers so that their education will reflect the current social changes and the curricular reform. This way the school will not only be a "teaching" organisation transferring the necessary knowledge and skills but it will actively participate in shaping the student's personality. This idea is emphasized by the constructivist approach which is based on the principle of student's active involvement in learning which means that the student does not just passively accept the knowledge but is actively involved in its creating. The application of the constructivist approach requires a professionally well-prepared teacher who is willing to provide students with enough space in the educational process. The required knowledge is thus constructed in the mind of the student and it does so based on the already existing knowledge schemes.

However, such preconceptions may sometimes hamper the process of learning. Often in the process of intercultural learning an individual person gets into a conflict with preconceptions which may take the form of stereotypes or prejudices. The constructivist approach to teaching is, in the case of intercultural learning, associated with the so-called transformational learning. Transformational learning converts the existing preconceptions (prejudices) into the desirable competencies of an individual person (Hladík, 2010). The teacher then assumes the role of a supporter and a guide. The cognitive process becomes individualised as its outcome depends on the particular objects of the pedagogical interaction. Each student is affected by pedagogical interaction in a different way. Therefore, the result of a pedagogical activity is different. *"We cannot put thoughts into the students' heads in an original form, but they themselves construct their own meaning"* (Hrbáčková, 2006, p. 9).

Jean Piaget is considered an important representative of constructivism (Piaget, Inhelderová, 1970) who described the process of construction of knowledge through the organization and adaptation. He believed that thought patterns are the basis (ideas, knowledge, and experience) and that they help persons understand the world around them. New knowledge is confronted with the well-established schemes and arranged through assimilation or accommodation. Assimilation means that new experiences adapt to the existing schemes. In accommodation, the existing schemes expand or create new ones through the process of reconstruction. The process of reconstruction occurs when there is a cognitive conflict, i.e. a discrepancy between the existing schemes and new knowledge. It is obvious that roles of the teacher and the student in the constructivist classroom will be different. Piaget's understanding of the teacher's role is related mainly to the following objectives (Hill, 2004):

- focuses on the process of learning rather than on its results,
- finds the level of each student in order to determine individual learning objectives,
- sets tasks that are challenging enough to create new schemes,
- encourages active interaction not only with objects related to the given task but also with other classmates.

It can be inferred from the above-mentioned characteristics that the teacher is no longer the dominant element of the learning process but plays a key role in optimisation of learning conditions. The teacher creates appropriate and stimulating environment so that the students can control their learning themselves and thus develop self-regulated learning. The constructivist approach in this sense is understood as a means for development of learner's autonomy and his/her learning. The characteristics of a constructivist teacher gravitate towards the following objectives (Hanley, 1994):

- to become one of many sources of knowledge,
- to encourage students to experiential learning,
- to give students an opportunity to manage their own learning,
- to encourage students to think about their own learning (i.e. metacognitive learning),
- to promote mutual discussion between students,
- to encourage and accept student's initiative and autonomy.

In the current expert literature, especially from abroad, the issue is paid considerable attention due to the fact that self-regulated learning of students is associated with their success at school. If the student is able to manage his/her learning they do not need an outside control. Such independence set them off on a journey to lifelong learning. This objective is currently seen as one of the key points of the curricular reform of education which has been taking place continuously since the late 1960s. The question still remains whether the new recruit teachers are sufficiently prepared for these changes and whether they have clear views of the support of self-regulated learning in students. If their concept does support self-regulated learning (with its constructivist foundation) the change in the conception of education in Czech schools will pose many problems.

Although there are a number of specialised studies that describe the importance of constructivist approach to education, we believe that there is no consensus among teachers on the approach to teaching and learning and on what is an optimal approach. There are different subjective opinions on what the teachers themselves should do and what the pupils/students should do to make learning at school effective. We mean the teacher's approach to teaching, i.e., *"the teacher's opinion on their own activities, the activities of students, and on what makes a good student"* (Mareš, In Průcha, 2009, p. 175).

In relation to the concept of teaching abroad, we encounter the term implicit theories of learning and teaching. They are based on an assumption that every teacher has his/her theory of teaching which *"directs his/her conduct in the classroom"* (Švec, 2005, p. 50), and this theory applies to every teacher. Like Mareš (1996) we understand the concept of teaching as a basis for teacher's pedagogical thinking and actions, which significantly influences teachers' way of teaching. It is:

- implicit (covert, since it takes the form of explicitly unformulatable opinions),
- subjective (individual, as it is typical of a particular teacher),
- spontaneous (caused by the changing pedagogical experience),
- relatively unconscious (the teacher does not control it consciously),
- oriented (the teacher accepts some opinions but refuses others and some sees as neutral),
- stereotypical (tends to be of a steady course),
- relatively stable (resistant to external interference and slowly changing in time).

The subjective approach to teaching serves as a filter for all the information that the teachers receive from the outside. For example, when facing theoretical information regarding the method of teaching, such information passes through the filter (in case the information does not correspond with his/her conception of teaching, it will not affect his or her way of teaching). Teachers' teaching activities, as suggested by Marland (In Maňák, Janík, Švec, 2008, p. 86) are not affected by their knowledge of pedagogical and psychological disciplines but by ideas, i.e. an inner frame which is implicit in nature. The author further elaborates that, unlike scientific theories, which are *"impersonal, universal, conceptually precise, specifically explicit and conform to logical rules"*, subjective theories have an opposite meaning. Given that the concept of teaching is very specific, we were interested in it primarily in connection with the self-regulated learning.

According to Zimmerman (2006), self-regulation cannot be seen as a personality trait or as a specific skill. It is an internal self-management process in which the learning individual transforms his/her personality into skills needed for learning. Although the current literature offers many theories of self-regulated learning, they all agree that the

process of self-regulated learning can be characterised by the level of student's engagement in their own learning process in terms of cognitive, metacognitive and motivational aspects. It is not just the actual knowledge (the cognitive aspect) but also regulation of cognition (the metacognitive aspect) and regulation of attitudes, motives, needs and emotions (the noncognitive aspect), which is the key to the onset of the process of self-regulated learning as mentioned in several sources from abroad.

The process of self-regulated learning is associated with mastery of experienced experts, such as artists, athletes, etc. It is not just practical exercises but particularly prudent self-management which Zimmerman considers to be a predictor of success. Research shows that training of self-regulation also leads to success at school. Students will learn, for example:

- how to activate their existing knowledge of the subject matter,
- to assess the difficulty of the curriculum (task),
- to assess their options to tackle the task,
- to recognize the benefits of the task,
- to plan their learning,
- to select appropriate strategies for learning,
- to be aware of their emotions when learning or solving the task,
- to observe and evaluate their learning process,
- to monitor changes in learning,
- to rationally assess their continuous learning outcomes,
- to adapt their learning to the given circumstances and conditions,
- to realize the need for assistance, seek help in time,
- to increase or decrease their effort,
- to show stamina, resist resignation on the task and to motivate themselves,
- to evaluate the accomplished task,
- to plan their next learning in other circumstances.

Developing self-regulated learning in students is becoming a common tool in the teaching profession, especially abroad. However, we believe that not every teacher is convinced that meta cognitive and noncognitive aspects play an indispensable role in the learning process of students. Teachers' conceptions of self-regulated learning can be very different.

It would surely be interesting to see whether teachers are able to support the development of students' self-regulation and thus create conditions for their lifelong learning. If we manage to identify the teachers' conceptions of self-regulated learning in students we can indirectly infer the probability of their encouraging it in practice.

## **2. Research**

The main objective of the research was to gain an insight into the subjective theories of self-regulated learning held by beginner teachers in the Zlín region. We attempted to determine whether beginner teachers support the development of self-regulated learning in students or rather tend to regulate their learning themselves and whether there are differences of opinion in new and experienced teachers regarding the rate of self-regulation in the sub-areas of the learning process, i.e. the curricular content, interaction with the student, teaching methods, and evaluation of the student. A partial objective was to analyse differences in the conception of self-regulated learning in students held by beginner teachers (with up to one year of experience) and by experienced teachers (with teaching experience from one to ten years or a long-term experience over ten years). The aim was to see whether their approach varies according to their gender, qualification, age or the grade they teach.

### *2.1 The Methodological Approach*

Based on the selected research questions, we decided to use quantitative research strategies. In our empirical investigation we were inspired by a research technique used in the study of Tillema (2000). We designed a questionnaire investigating the teacher's approach to teaching and learning in connection with their inclination towards the traditional approach with a high degree of control of students' learning or towards the constructivist concept of a wide support of students' self-regulated learning. The questionnaire contained twelve pairs of

contradictory statements that teachers rated on a seven-point scale. The higher values represented a greater support for students, self-regulated learning. Items in the questionnaire were distributed randomly and divided into sub-areas:

- Content of education (3 pairs of statements, e.g. *"Teaching is the process of providing students with information," "Learning is a process of active processing of information by each student"*);
- Interaction with students (3 pairs of statements, e.g. *"Students can achieve the best results if they control their own way of learning", "Students can achieve the best results when it is clearly stated what is expected from them"*);
- Teaching methods (3 pairs of statements, e.g. *"Students get motivated to learning primarily by reward (e.g. mark or praise)", "Students get motivated to learning primarily by their internal interest"*);
- Assessment of the student (3 pairs of statements, e.g. *"Assessment is entirely in the competence of the teacher", "Students are able to control their own learning outcomes"*).

The research sample comprised beginner and experienced teachers from the Zlín region. The basic sample consisted of all schools in the Zlín region which were included in the Register of Schools (version 1.93) under the Ministry of Education, Youth and Sports of the Czech Republic. By a random selection (lottery) 5 elementary and 5 secondary schools were chosen in the Zlín region along with the students of teacher training at the Faculty of Humanities of Tomas Bata University in Zlín. Due to the requirement for anonymity we do not provide the names of the schools. The sample included a total of 213 respondents. 102 correctly completed questionnaires were analysed in the survey. These were further processed statistically (teachers who are actively engaged in the teaching profession), i.e. a total of 48% beginner teachers (with up to one year of experience) and 52% of teachers with teaching experience (with teaching experience from one to ten years or a long-term experience over ten years). The demographic characteristics of the research sample showed that the age of respondents ranged from 20 to 64 years (average 32.9 years, standard deviation 10.35 years). The average length of experience of respondents ranged from 0 to 40 years (average 6.9 years, standard deviation 9.47 years). 79% of women and 21% of men participated in the research. Of the 102 respondents, 33% specialised in pre-primary and primary education, 19% in higher elementary education and 48% in secondary education. The respondents were represented by 40% of qualified teachers and 60% of unqualified teachers. The unqualified teachers were especially students of teacher training, also beginner teachers and experienced teachers.

Table 1. Tables of demographic characteristics and their frequencies

Variable	Table of frequencies		
		Absolute frequencies	Relative frequencies
Gender	male	21	79
	female	81	21
Qualification	qualified	41	40
	unqualified/underqualified	61	60
Level of specialisation	pre-primary and primary education	34	33
	higher elementary education	19	19
	secondary education	49	48

In addition to the basic descriptive statistics (i.e. absolute and relative frequencies, and standard deviations), we also used selected statistical tests (a single factor analysis of variance ANOVA and a multivariate analysis of variance MANOVA) to determine the differences in the teacher's conception of students' self-regulated learning according to the selected factors. The data were evaluated in the programme Statistica Base 10 supplemented by graphs and interpreted. Before using the selected statistical test the normality and homogeneity of variances were verified.

## 2.2 Data Analysis

Descriptive statistics (see Table 2) indicate that the conception of self-regulated learning in beginner teachers is around the mean value. In the range of values from 1 to 7, the average score is 3.925 points. The value is slightly above the median value however it does not show a strong inclination to develop student's self-regulated learning. We believe that such results may indicate situational conditionality of the concept of self-regulated learning (in

some ways supporting students' self-regulated learning, in other ways regulating students' learning) or neutrality of beginner teachers, i.e. they may not even realize their conception (hence expressing neutrality).

Table 2. Descriptive statistics of partial conceptions of students' self-regulated learning in beginner teachers

Descriptive statistics in beginner teachers							
Variable	N of valid	Mean	Intervals of reliability -95,000%	Intervals of reliability 95,000%	Minimum	Maximum	Standard deviation
Content	49	4,299	3,966	4,632	1,333	6,667	1,159
Interaction	49	4,129	3,861	4,398	1,667	6,000	0,935
Methods	49	3,422	3,120	3,723	1,333	5,667	1,049
Assessment	49	3,850	3,507	4,193	1,667	6,000	1,194

The table above shows that the conception of student self-regulated learning is higher in the content of education and interaction with students. In contrast, teaching methods are understood more traditionally by beginner teachers (they tend to regulate more the student learning than developing their self-regulation).

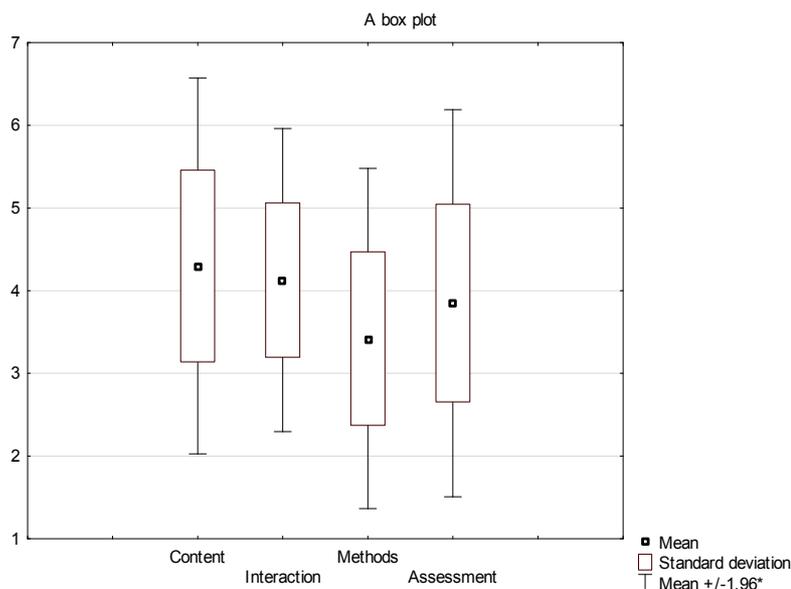


Figure 1. A box plot of partial conceptions of self-regulation from the perspective of beginner teachers

Beginner teachers responded that the quality of teaching depends more on how the teacher can explain the content and his/her ability to maintain discipline in the classroom. They argued that it is the teacher who chooses the way of teaching. The values of the particular conceptions of self-regulated learning still range around the mean value. If we look at the emerging conception of teaching we will find that the conception of self-regulated learning by experienced teachers is of lower values which means they rather end to regulate students' learning (see Figure 2). This finding is seen as a surprising one. We assumed that among the teachers with several years of teaching experience there would be more experienced teachers who incline towards the constructivist conception of learning. We can indirectly infer that the conception of developing students, self-regulated learning does not depend on the length of being engaged in the teaching profession and also that not all experienced teachers are experts.

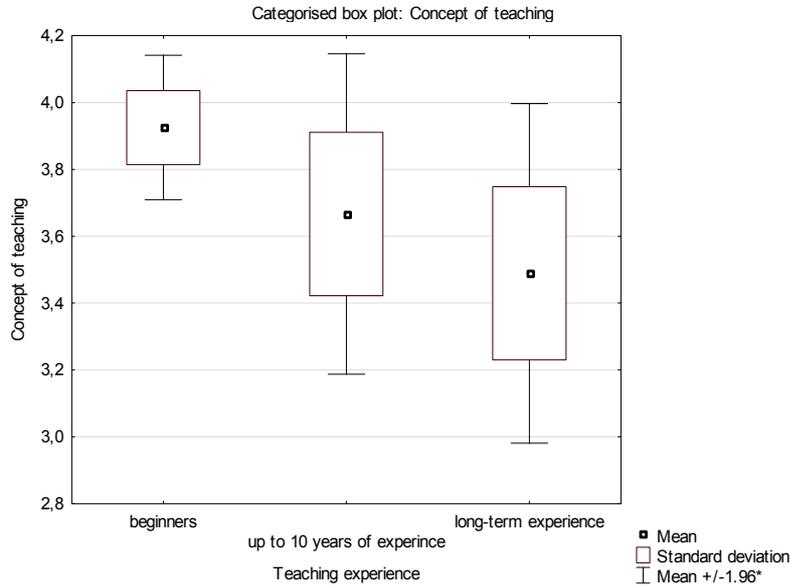


Figure 2. A box plot of the total conception among beginner teachers and teachers with teaching experience. The results of the statistical analysis of differences in the overall conception of self-regulated learning among beginner teachers and teachers with experience showed that their approach does not differ significantly ( $p = 0.215$ ). Teachers with years of experience may maintain the traditional (or undefined) conception for many different reasons, e.g. because they are not motivated to further education or as a result of an increasing teaching experience their conception becomes resistant to change. It is also possible that the conception is influenced by the teachers' personality dispositions.

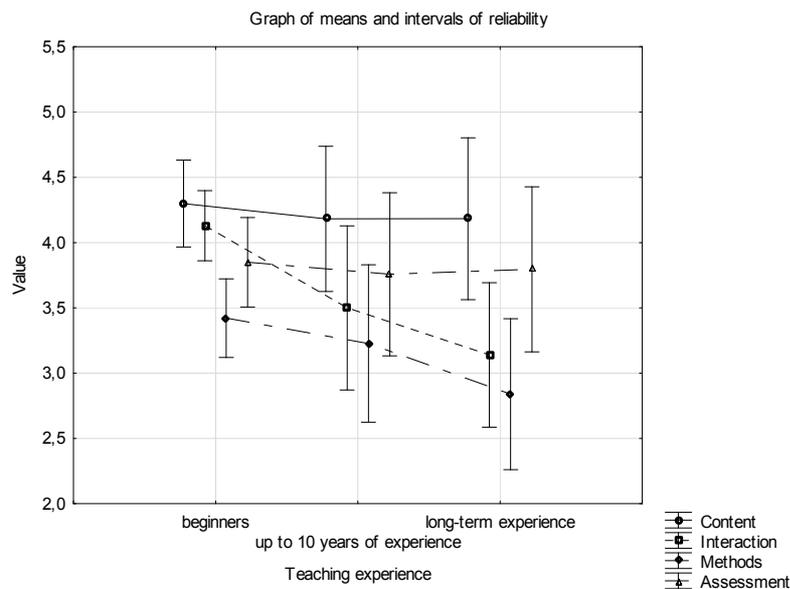


Figure 3. Graph of interaction of partial conceptions among beginner teachers and teachers with experience. When analysing the differences of partial conceptions we found out that statistically significant differences can be traced in the conception of interaction with students ( $p = 0.002$ ).

Table 3. Differences in conceptions of self-regulation among students of teacher training and teachers with teaching experience

Parsing table of descriptive statistic								
Teaching experiences	Content average	Content SD	Interaction average	Interaction SD	Methods average	Methods SD	Assessment average	Assessment SD
Beginner teacher	4,299	1,159	4,129	0,935	3,422	1,049	3,850	1,194
Up to 10 years of experience	4,182	1,255	3,500	1,417	3,227	1,362	3,758	1,407
Long-term experience	4,183	1,691	3,140	1,510	2,839	1,577	3,796	1,725
All groups	4,239	1,348	3,693	1,306	3,203	1,308	3,814	1,405

The results of the analysis show that teachers with a long teaching experience (over 10 years) differed significantly in their conception of interaction with students from the novice teachers ( $p = 0.001$ ), whose conception aim sat developing self-regulated learning in students. Teachers with years of experience tell us that students should rather meet the requirements of the teacher and the teacher should assume a greater control of their learning. The values of partial conceptions are fairly well dispersed from the average. It can thus be assumed that the variability in teachers' approach to teaching is caused by other factors than their teaching experience. We therefore investigated the influence of other variables, i.e. gender, qualification, age and level of teachers' specializations. In this case it would seem appropriate to use a multifactorial analysis of variance. Given that the sample was not adequately represented by the groups, we decided to use a multivariate analysis of variance and find the interaction effects of partial factors on the individual conceptions of teaching (curricular content, interaction with students, teaching methods and assessment of students). Based on the above results, we can indirectly infer that teachers of older age (and of experience) displayed a more traditional conception than their younger counterparts (in the conception of interaction with the students). For this reason we decided to analyse the differences in the conception of students' self-regulated learning by the age the teachers.

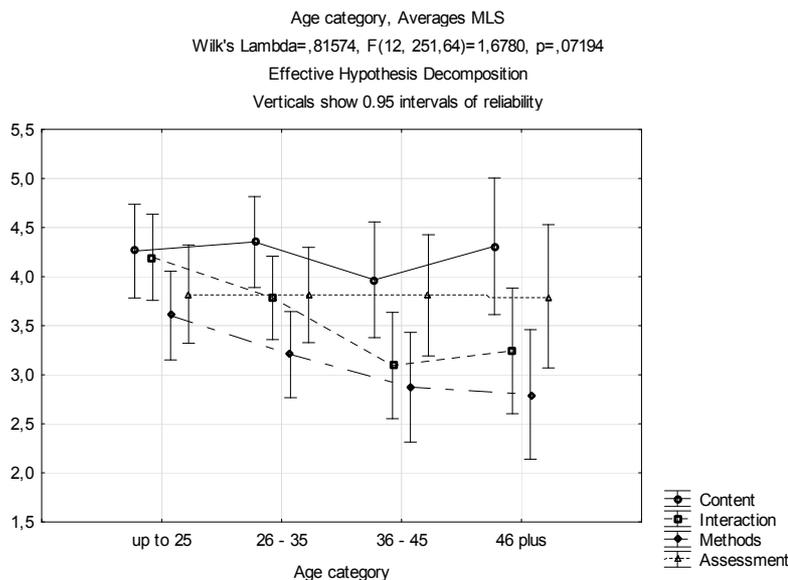


Figure 4. Graph of differences in individual conceptions of self-regulation according to the age of teachers

The overall effect of age on all four dependent variables was not statistically significant ( $p = 0.072$ ). The age does not play any role in teachers' conception of students' self-regulated learning. The effect was significant, in accordance with our assumptions, for the conception of interaction ( $p = 0.009$ ). Teachers up to 25 years age promoted the independence of the student and his/her decisions about their way of learning more than teachers

who are over 36 years of age. In the graph above we can also see that the conception of content by teachers over 45 years is more innovative (they support the development of self-regulated learning in students) than in younger teachers. However, these differences are not statistically significant. Older teachers conceive methods of teaching in a most regulatory way.

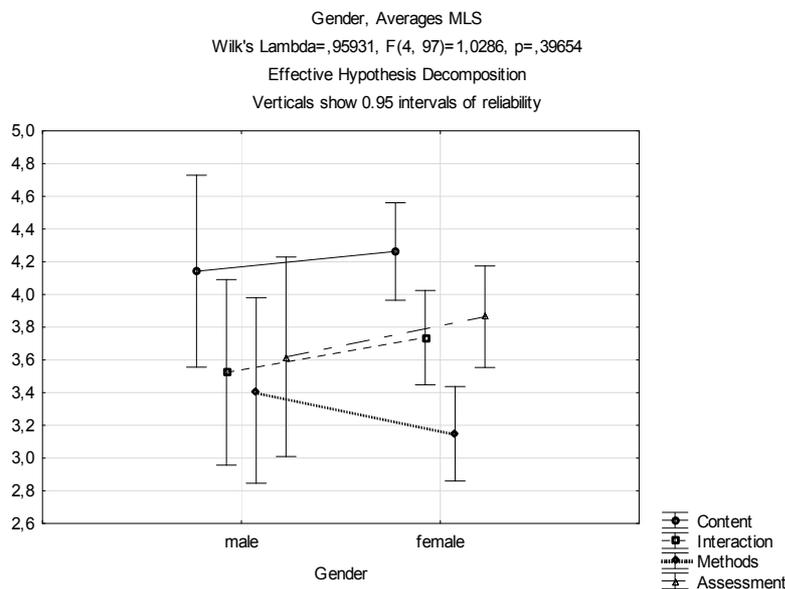


Figure 5. Graph of differences in individual conceptions of self-regulation according to gender of teachers

Further results (see Figure 5) showed that the effect of gender on all four dependent variables is not significant ( $p = 0.397$ ). Male and female teachers do not differ significantly in partial conceptions of teaching. The gender factor in teachers does not play an important role in the conception of students' self-regulated learning in the Zlín region.

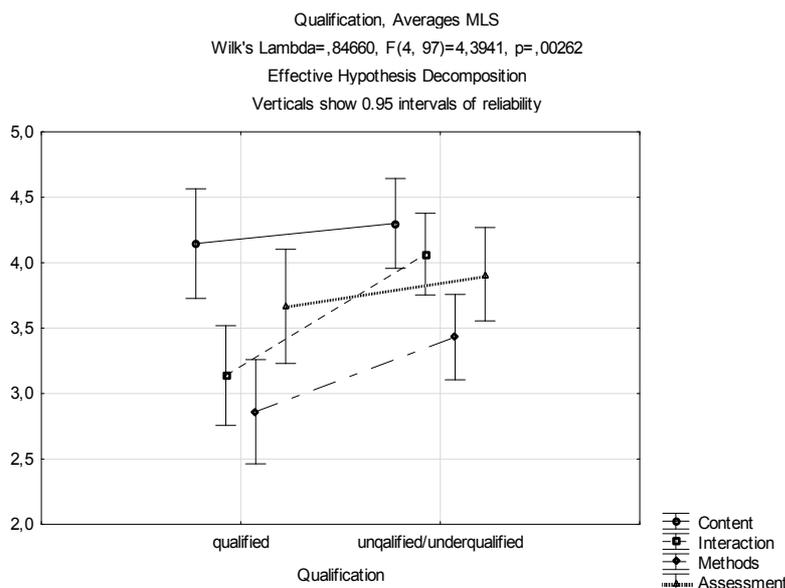


Figure 6. Graph of differences in individual concepts of auto regulation according to qualification of teachers

Through another analysis we came to the conclusion that teachers who are unqualified or under qualified display a significantly different conception of self-regulated learning than the qualified ones. The overall effect of qualification on all four dependent variables is statistically significant ( $p = 0.003$ ). Interestingly, unqualified or under qualified teachers tend to support the development of self-regulated learning in students to a greater extent than the teachers who are qualified and who are in their conception of interaction ( $p = 0.001$ ) and teaching methods ( $p = 0.03$ ) more conservative. Both variables contribute significantly to the overall multidimensional effect.

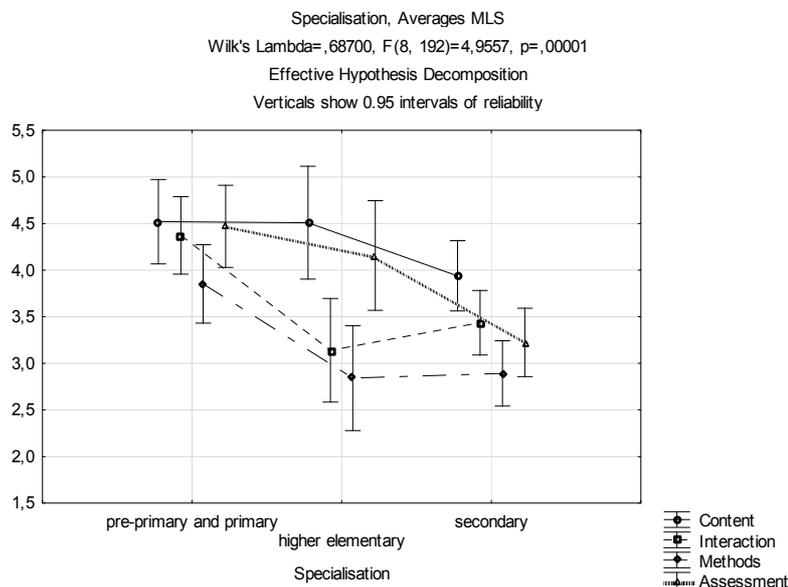


Figure 7. Graph of differences in individual conceptions of self-regulation according to the specialization of teachers

Based on the analysis of differences in the conception of students' self-regulated learning by teachers' specializations, it has been concluded that the specialization of the teacher plays a significant role in his/her conception of self-regulated learning in students ( $p = 0.001$ ). The chart above shows that teachers specializing in preprimary and primary teaching hold to a greater extent the conception of self-regulated learning development in their students than teachers specializing in higher primary teaching. The conception of secondary school teachers was significantly different from the teachers who teach the younger group of pupils. The effect was significant for three dependent variables. Such finding is considered surprising, given that pupils in young school age can find it problematic to develop self-regulated learning. In this group of students we would expect a greater tendency of the teacher to regulate, which, however, was not confirmed. A more detailed analysis showed similar trends in the partial conceptions of teaching. The conception of the curricular content does not depend on the specialization of teachers ( $p = 0.096$ ), i.e. all teachers, regardless the degree of specialization, perceive curriculum similarly. However, the conception of interaction with students ( $p = 0.001$ ), the conception of teaching methods ( $p = 0.001$ ) and the conception of student assessment ( $p = 0.001$ ) according to their degree of specialization varies significantly. Although secondary school teachers perceive the content of teaching as preprimary and primary teachers, i.e. more in line with the constructivist approach, their conception of interaction and teaching methods is directed more towards the control of students.

### 3. Conclusion

Based on our empirical investigation we found out that the conception of students' self-regulated learning is rather undefined in beginner teachers, which may be due to certain contextual conditionality, or because they do not fully recognize their concept yet. When comparing the partial conceptions we found out that they achieve higher levels in curricular content and interaction with students. In contrast, teaching methods of novice teachers are understood rather traditionally (they tend to regulate the students learning more than they support the development of students' self-regulation). The values of the partial conceptions of self-regulated learning still oscillate around the mean value. Similar tendencies, however, were found in the conception of self-regulated learning in teachers with teaching practice. Here we would expect a more defined conception of self-regulation. The results of the analysis of differences in the overall concept of teaching in the beginner teachers and teachers with experience have shown that they are similarly ambivalent. Teachers with years of experience (over 10 years) differed significantly only in the conception of interaction with students from the novice teachers, whose conception aims to support more the development of self-regulated learning in students. Teachers with years of experience can maintain a more traditional (or undefined) conception for many different reasons, e.g. because they are not motivated to pursue further education or as a result of an increasing teaching experience their conception becomes more resistant to a change.

The values of partial conceptions are fairly well dispersed from the average and it can thus be assumed that the variability in teachers' conception of teaching is caused by other factors than their practical teaching experience. We therefore investigated the influence of other variables, i.e. gender, qualification, age and specialization. In determining the differences in partial conceptions of teaching we have not seen significant differences between male and female teachers. Men and women perceived the content of education, interaction with the student, teaching methods and student assessment in a similar manner. We also found out that age is not an essential factor in shaping the conception of teaching. Their conception is, regardless of age, similar in teachers of younger and older generations. The result was similar to the differences in between the starting and experienced teachers, i.e. only significant in the partial conception of interaction with students. Teachers of younger age groups promote the independence of the student and his/her decisions making concerning their own way of learning more than teachers of older ages do.

We concluded that the specialization of the teacher has a major impact on his/her conception of teaching. Except for the conception of the curricular content, teachers with various specializations differ significantly in their conception of teaching. Teachers and students of teaching who specialize in preprimary and primary pedagogy hold a more constructivist conception than teachers who specialize in higher elementary education. The conception in secondary school teachers differs significantly from teachers who teach the younger group of pupils. An important finding is that teachers who are unqualified and under qualified show a higher tendency to support the development of self-regulation in the area of interaction with students than teachers who are qualified and who also hold a more conservative approach.

These findings were observed in a limited sample of respondents and therefore we consider them an indicative insight into the conception of students' self-regulated learning from the perspective of teachers in the Zlín region. Nevertheless, we believe that the results revealed some interesting trends that need to be verified further. Due to the high variability of the conception of self-regulated learning in individual teachers it would be appropriate to use a cluster analysis to identify and validate a typology of conceptions of self-regulated learning in teachers and to focus on the context-conditionality (through a qualitative analysis). The most important conclusions are listed below:

Table 4. An over view of the research findings

The research findings	
1	<i>The overall conception of self-regulated learning between the beginner and experienced teachers does not differ significantly.</i>
2	<i>Teachers with several years of experience (more than 10 years) differ significantly in the partial conception of interaction compared to beginner teachers whose conception aims more to develop student's self-regulated learning.</i>
3	<i>The age of the teacher in the conception of student's self-regulated learning does not play a significant role.</i>
4	<i>Teachers of younger generations differ significantly in the partial conception of interaction from the older generation of teachers who are more inclined to regulate students' learning.</i>
5	<i>The teacher's gender factor does not play a significant role in the conception of student's self-regulated learning.</i>
6	<i>Unqualified or under qualified teachers display a significantly different conception of student's self-regulated learning than qualified teachers.</i>
7	<i>Unqualified or under qualified teachers tend to support the development of student's self-regulated learning more than qualified teachers who are in their interaction conceptions and methods of teaching more conservative.</i>
8	<i>The level of specialization plays a significant role in teachers' conception of student's self-regulated learning.</i>
9	<i>The conception of the curricular content does not depend on the specialization of teachers, i.e. all teachers, regardless of their degree of specialization, perceive curriculum similarly.</i>
10	<i>Teachers who specialize in preprimary and primary levels hold onto the conception of student's self-regulated learning more than teachers who specialise in higher primary level of education.</i>
11	<i>The conception of interaction with students, the conception of teaching methods and approaches to the assessment of students according to the degree of specialization of teachers differs significantly.</i>

#### 4. Discussion

We believe that the findings may serve as a basis for the preparation and modification of the current model used in preparation of future teachers. It is obvious that when preparing teachers we need to focus on their conception of teaching. We believe that the teacher's conception of students' self-regulated learning should be an important part of their professional preparation, especially during the curricular reform which is expected to contain applied innovative elements (e.g. the constructivist approach). However, it turns out that knowledge of the constructivist approach does not guarantee its implementation in practice. It has also shown that the teacher's conception of self-regulated learning should be focused on and systematically worked with at the faculties preparing teachers for their future career and in practice (in the form of further education of teachers). Through empirical investigation we found out that the conception of teaching and learning in beginner and experienced teachers should be focused on, given that it seems to be undefined (and in some respects inclined more to controlling the students). Our sample shows, as was also confirmed in studies done by Janík et al. (2009), that teachers tend to regulate the student, which is especially surprising in a group of qualified teachers, teachers with years of experience and teachers who specialize in a higher level of education. Manifestations of support of development of students' self-regulated learning were recorded only in a limited amount and in particular conceptions.

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