

Research on the professional activities of secondary school teachers

One of activities of the Czech TTnet unit focuses on a professional standard of teachers in upper secondary vocational education. The Network members acquaint themselves with professional standards of teachers from partner countries and participate in international projects in this field. They try to formulate professional competences of technical and vocational school teachers as well as criteria for their assessment. A professional standard of teachers in secondary vocational education represents a major topic at every TTnet conference.

In 2008, a questionnaire survey among teachers was conducted, thanks to initiative of doc. Ing. Petr Byčkovský, CSc. who used as a basis a questionnaire developed at the Education Testing Service. (<http://www.ets.org>) The questionnaire had to be translated and adapted to circumstances in the Czech Republic. The aim of the survey was to identify and assess professional activities performed by teachers in secondary vocational education.

Data collection

Data was collected through TTnet ČR web pages where an on-line questionnaire was placed between 15 June and 15 September 2008. More than 1100 secondary technical and vocational schools were informed about it by e-mail messages. 288 completed questionnaires came back.

Characteristics of respondents

From total of 288 respondents, 58% was formed by women and 42% by men. The most represented age group was teachers between 45 and 54 year-olds, 106 persons, i.e. 39.1%.

If 45 years is taken as an average in teachers' working life then more than 60% of respondents were above the average age. This figure only confirms *ageing* the teaching profession.

Table 1: Distribution of the teachers by age groups

Age of respondents	Number	%
under 25	6	2.1
from 25 to 34	43	15.9
from 35 to 44	59	21.8
from 45 to 54	106	39.1
from 55 to 64	53	19.6
65+	4	1.5
Total	271*	100.0

*17 respondents skipped the question.

The group of respondents can be labeled as very experienced according to years of teaching. 86 respondents

(31.7%) that have taught for 21 years or more form the most numerous part. At the other end of an imaginary ladder are beginning teachers with teaching practice shorter than 6 years, only 37 respondents (13.7%).

Table 2: Distribution of the teachers by years of teaching

Years of teaching	Number	%
≥ 1	3	1.1
from 1 to 2	11	4.1
from 3 to 5	23	8.5
from 6 to 10	52	19.2
from 11 to 15	45	16.6
from 16 to 20	51	18.8
21+	86	31.7
Total	271*	100.0

*17 respondents skipped the question.

The survey has been intended for teachers from technical and vocational schools and consequently the highest education achieved by them varies in nature. The most frequent education is graduation from university, i.e. Master's degree, or from technical and commercial higher education institutions, the degree at the same level as Master is called *engineer*. 184 respondents (68.4%) completed this level of education, teachers of academic subjects among them. On one hand, the representation of graduates with PhD degrees is considered as a favourable circumstance, but on the other hand the relatively high number (38, i.e. 14.1%) of upper secondary school graduates (ISCED 3) without an apprenticeship certificate is not satisfactory.

Table 3: Distribution of the teachers by education achieved

Education of respondents	Number	%
apprenticeship certificate + Maturita	12	4.5
Maturita**	38	14.1
tertiary technical school (VOŠ)	12	4.5
bachelor's degree	11	4.1
Master, Ing. (<i>engineer</i>)	184	68.4
PhD	12	4.5
Total	269*	100.0

*19 respondents skipped the question.

** Upper secondary school leaving examination and certificate

The most frequent work status is a teacher of vocational subjects at secondary technical or vocational schools; it is declared by 77 respondents (28.4%). The second numerous group consists of teachers of academic subjects; 71 respondents (26.2%). Teachers of vocational subjects at secondary vocational schools are represented by 35 respondents (12.9%). A work status called *combination* means either teaching vocational subjects at a secondary technical school and at a secondary vocational school or teaching both vocational and academic subjects. The first possibility, i.e. teaching vocational subjects in various types of programmes leading towards either Maturita certificate or apprentice certificate is more frequent; 42 respondents (15.5%). Participation of 39 respondents with status of teachers of practical training (14.4%) and 7 teachers of work experience (2.6%) is really appreciated. A comparison of data on education achieved and work statuses reveals that several teachers of practical training do that without having apprentice certificate themselves.

Table 4: Distribution of the teachers by working status

Working status of respondents	Number	%
teachers of practical training	39	14.4
teachers of work experience	7	2.6
teachers of vocational subjects SOU**	35	12.9
teachers of vocational subjects SOŠ**	77	28.4
teachers with <i>combination</i>	42	15.5
teachers of academic subjects	71	26.2
Total	271*	100.0

*17 respondents skipped the question.

** SOU = secondary vocational school; SOŠ = secondary technical school.

The greater part of respondents work at school full time, total 253 (93.7%). Only 17 respondents (6.3%) work at school part time. Similarly, most of respondents work in urban schools; 191 (71.3%). 29 respondents characterize their schools as rural (10.8%) and remaining 48 respondents (17.9%) as suburban schools.

Tables 5: Teaching load & School location

Type of teaching load	Number	%
full-time	253	93.7
part-time	17	6.3
Total	270*	100.0

*18 respondents skipped the question.

School location	Number	%
urban school	191	71.3
suburban school	48	17.9
rural school	29	10.8
Total	268*	100.0

*20 respondents skipped the question.

Table 6 indicates numbers of respondents from regions. The most represented is the Zlin Region, the less represented are the Pardubice and Vysočina Regions.

Table 6: Distribution of the teachers by regions

Name of region	Number	%
Zlin Region	54	19.5
Praha Region	37	13.4
South Bohemian Region	37	13.4
Moravian-Silesian Region	32	11.6
Olomouc Region	28	10.1
Hradec Králové Region	17	6.1
Central Bohemia Region	15	5.4
Usti Region	15	5.4
Pilsen Region	11	4.0
Liberec Region	10	3.6
South Moravian Region	10	3.6
Karlovy Vary Region	7	2.5
Pardubice Region	2	0.7
Vysočina Region	2	0.7
Total	277*	100.0

*11 respondents skipped the question.

The questionnaire and its structure

The questionnaire has a form of an inventory of 83 items, which describe teacher activities. Items are divided into following fields:

- Planning and preparation of teaching (26 items);
- Instruction itself (18 items);
- Assessment of both students' learning outcomes and efficiency of teaching (11 items);
- Teacher activities in addition to teaching (23 items);
- Other activities connected with teaching profession (5 items).

Respondents express their subjective feelings about every item through scale. They judge:

- Time consuming;
- Importance;
- Importance for beginning teachers.

Besides the inventory of items, the questionnaire includes a part on demographic data of respondents and a room for respondents to express their opinions of the questionnaire and its suitability.

Assessing time consumption of professional activities

Respondents are to take into account everything that an activity comprising during a school year and to estimate as accurately as possible the time required.

Time consumption of a professional activity is assessed using a four-level scale:

- 0 (Almost) no time devoted to the activity;
- 1 Little time devoted to the activity;
- 2 An average time devoted to the activity;
- 3 Plenty of time devoted to the activity.

During the research processing the gathered answers are divided and an average assessment is produced. For

categorization of answers the following intervals are chosen:

<i>(Almost) no time devoted to the activity</i> 0 – 0.49	<i>Little time devoted to the activity</i> 0.5 – 1.49	<i>An average time devoted to the activity</i> 1.5 – 2.49	<i>Plenty of time devoted to the activity</i> 2.5 – 3
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Assessing importance of professional activities

The importance of the professional activity is assessed using a six-level scale and two dimensions.

<p>Dimension 1 Assessing importance for respondents</p> <p>0 I do not perform the activity 1 The activity is not important 2 The activity is of little importance 3 The activity is of average importance 4 The activity is very important 5 The activity is extremely important</p>
<p>Dimension 2 Assessing importance for beginning teachers according to respondents</p> <p>0 Beginning teachers usually do not perform the activity 1 The activity is not important 2 The activity is of little importance 3 The activity is of average importance 4 The activity is very important 5 The activity is extremely important</p>

Dimension 1: Assessing importance for respondents

Respondents are to state how important an activity is for them regardless of its time consumption using the scale above.

During the research processing the gathered answers are divided and an average assessment is produced. For categorization of answers the following intervals are chosen:

I (almost) do not perform the activity 0 – 0.49	The activity is not important 0.5 – 1.49	The activity is of little importance 1.5 – 2.49
The activity is of average importance 2.5 – 3.49	The activity is very important 3.5 – 4.49	The activity is extremely important 4.5 – 5

Dimension 2: Assessing importance for beginning teachers according to respondents

Respondents are to state how important an activity is for beginning teachers regardless of its time consumption using the scale above.

During the research processing the gathered answers are divided and an average assessment is produced. For categorization of answers the following intervals are chosen:

Beginning teachers usually do not perform the activity 0 – 0.49	The activity is not important 0.5 – 1.49	The activity is of little importance 1.5 – 2.49
The activity is of average importance 2.5 – 3.49	The activity is very important 3.5 – 4.49	The activity is extremely important 4.5 – 5

Survey Results

Assessing professional activities in the field of *Planning and preparation of teaching*

Assessing time consumption of professional activities

The activity with the highest rating achieves an average value of 2.56 (i.e. averagely or very time consuming) whereas the activity with the lowest rating has a value of 1.61 (i.e. averagely time consuming).

It means that most of activities are assessed by respondents as around average, or the interval between values 1.5 and 2.49 (*An average time devoted to the activity*) incorporates 80% of items. The results suggest that most of assessed activities are distributed evenly from the respondents' point of view.

Professional activities put into category *Plenty of time devoted to the activity* are as follows:

- Following students' behavior in the classroom (i.e. keeping eye contact, monitoring movement) and through this supporting effort of students to achieve the best outcomes possible (average 2.56 points);
- Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes) (average 2.54 points);
- Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives (average 2.52 points)

The remaining professional activities are placed in interval *An average time devoted to the activity*.

Table 7: Assessing time consumption of professional activities in the field of *Planning and preparation of teaching*

Serial no.	Activities (number of the question in the questionnaire)	Time consuming
1.	Following students' behavior in the classroom (i.e. keeping eye contact, monitoring movement) and through this supporting effort of students to achieve the best outcomes possible (20)	2.56
2.	Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes) (5)	2.54
3.	Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives (3)	2.52
4.	Preparing tests and exercises for measurement of students' achievements (16)	2.48

5.	Praising and encouraging desirable behavior of students (22)	2.46
6.	Stipulating clear rules, procedures and ways of working in the classroom and conveying them to students and their parents (17)	2.42
7. – 8.	Studying thoroughly approved curriculum of a subject and stipulating objectives for the subject in the grade (1)	2.39
7. – 8.	Managing classes with regard to time in such a way that enable to keep students working at full stretch (24)	2.39
9. – 10.	Before instruction, choosing suitable teaching methods (e.g. lecture, team work, individual work, cooperative learning, discussions, laboratory exercises) (8)	2.37
9. – 10.	Preparing materials using by students during classes (worksheets, tasks, technical documentation, etc.) (13)	2.37
11.	Modifying instruction depending on learning outcomes of students to take into accounts their individual requirements (6)	2.34
12.	Designing the course of classes to use effectively the teaching time (9)	2.32
13.	Securing or preparing teaching aids for using in the class (graphs, shapes, models, plastic sheets for overhead projector, computer programs, workbooks) (12)	2.31
14.	Specifying general objectives of a subject into particular objectives of the subject for the grade (2)	2.30
15.	Channeling, restricting, possibly also punishing inappropriate behavior of students (23)	2.29
16.	Lesson planning including specific objectives, teaching strategies and students' assessment (11)	2.27
17.	Characterizing current level of students' knowledge and their readiness for planned learning activities (4)	2.24
18.	Using suitable methods and synergy with other members of staff to channel and restrict inappropriate behavior of students (26)	2.22
19.	Ensuring maintenance of order during students' comings and goings to and from the classroom, monitoring behavior of both individuals and groups (19)	2.21
20.	Ensuring adherence to safety rules and monitoring proper and safe condition and operation of machines, aids, instruments, equipment and materials using by students (18)	2.20
21.	Planning assessment of students' learning outcomes to be in relation with specific objectives of teaching (10)	2.17
22.	Making a decision on ways of checking and assessing students' learning outcomes before the teaching starts (7)	2.12
23.	Maintaining order in case of unforeseen situation as well (25)	2.03
24.	Monitoring activities in the classroom and stipulating or changing seating plan to be optimal for fulfilling objectives (21)	2.00
25.	Preparing machines, materials, instruments, didactical technique (e.g. overhead projector, interactive whiteboard, etc.) and checking their functionality for using during instruction (14)	1.98
26.	Preparing and maintaining bulletin boards showing students' works, news, graphs and posters supporting learning (15)	1.61
Plenty of time/relatively plenty of time devoted to the activity		An average time devoted to the activity

Assessing importance for beginning teachers according to respondents in the field of *Planning and preparation of teaching*

The activity with the highest rating achieves an average value of 3.98 (i.e. the activity is very important) whereas the activity with the lowest rating has a value of 2.89 (i.e. the activity is averagely important).

85% of activities in the field of *Planning and preparation of teaching* are put by respondents into category *The activity is important or very important*. Four activities are rating as of average importance.

Comparing results in assessing importance for respondents and in assessing importance for beginning teachers

There are only small differences between assessing in the two dimensions, i.e. the activities are assessed as equally important for respondents themselves and for beginning teachers in respondents' views.

Nevertheless, some differences reveal. Respondents declare several activities as relatively more important for beginning teachers

Table 8: Assessing importance of activities for respondents and for beginning teachers in the field of *Planning and preparation of teaching*

Activities (arranged according to difference in importance for respondents and for beginning teachers in favour the latter, in descending order)	Assessing importance for		Difference
	respondents	beginning teachers	
Studying thoroughly approved curriculum of a subject and stipulating objectives for the subject in the grade (1)	3.88	4.18	0.30
Lesson planning including specific objectives, teaching strategies and students' assessment (11)	3.67	3.97	0.30
Specifying general objectives of a subject into particular objectives of the subject for the grade (2)	3.60	3.89	0.29
Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives (3)	3.78	4.03	0.25
Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes) (5)	3.77	4.02	0.25

On the contrary, the professional activity *Manage classes with regard to time in such a way that enable to keep students working at full stretch* (24) is considered by respondents as relatively more important for themselves than for beginning teachers (difference 0.3 point).

Comparing results in assessing time consumption and importance for respondents

In principle, there is a direct proportion between time consumption and importance, i.e. the important professional activities are more time consuming as well.

More distinctive differences reveal in following activities:

- the activity *Ensuring adherence to safety rules and monitoring proper and safe condition and operation of machines, aids, instruments, equipment and materials using by students* (18) is considered as very important but averagely time consuming;
- the activity *Channeling, restricting, possibly also punishing inappropriate behavior of students* (23) is also considered as very important but averagely time consuming.

Table 9: Assessing importance of professional activities in the field of *Planning and preparation of teaching*

Activities (number of the question in the questionnaire)	Serial no. (points below)		
	Assessing importance for respondents	Assessing importance for beginning teachers	Assessing time consumption
Praising and encouraging desirable behavior of students (22)	1. 4.00	4. – 5. 3.98	5. 2.46
Ensuring adherence to safety rules and monitoring proper and safe condition and operation of machines, aids, instruments, equipment and materials using by students (18)	2. 3.96	8. 3.91	20. 2.20
Stipulating clear rules, procedures and ways of working in the classroom and conveying them to students and their parents (17)	3. 3.92	4. – 5. 3.98	6. 2.42
Following students' behavior in the classroom (i.e. keeping eye contact, monitoring movement) and through this supporting effort of students to achieve the best outcomes possible (20)	4. 3.91	6. – 7. 3.97	1. 2.56
Studying thoroughly approved curriculum of a subject and stipulating objectives for the subject in the grade (1)	5. 3.88	1. 4.18	7. – 8. 2.39
Managing classes with regard to time in such a way that enable to keep students working at full stretch (24)	6. 3.81	23. – 24. 3.51	7. – 8. 2.39
Channeling, restricting, possibly also punishing inappropriate behavior of students (23)	7. 3.80	14. 3.84	15. 2.29
Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives (3)	8. 3.78	2. 4.03	3. 2.52
Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes) (5)	9. 3.77	3. 4.02	2. 2.54
Preparing tests and exercises for measurement of students' achievements (16)	10. 3.75	10. – 11. 3.88	4. 2.48
Modifying instruction depending on learning outcomes of students to take into account their individual requirements (6)	11. – 12. 3.72	20. 3.65	11. 2.34
Before instruction, choosing suitable teaching methods (e.g. lecture, team work, individual work, cooperative learning, discussions, laboratory exercises) (8)	11. – 12. 3.72	13. 3.85	9. – 10. 2.37
Using suitable methods and synergy with other members of staff to channel and restrict inappropriate behavior of students (26)	13. – 14. 3.69	16. 3.72	18. 2.22
Preparing materials using by students during classes (worksheets, tasks, technical documentation, etc.) (13)	13. – 14. 3.69	15. 3.82	9. – 10. 2.37
Lesson planning including specific objectives, teaching strategies and students' assessment (11)	15. – 16. 3.67	6. – 7. 3.97	16. 2.27
Securing or preparing teaching aids for using in the class (graphs, shapes, models, plastic sheets for overhead projector, computer programs, workbooks) (12)	15. – 16. 3.67	12. 3.86	13. 2.31
Ensuring maintenance of order during students' comings and goings to and from the classroom, monitoring behavior of both individuals and groups (19)	17. – 18. 3.65	18. – 19. 3.67	19. 2.21
Designing the course of classes to use effectively the teaching time (9)	17. – 18. 3.65	10. – 11. 3.88	12. 2.32
Specifying general objectives of a subject into particular objectives of the subject for the grade (2)	19. 3.60	9. 3.89	14. 2.30
Characterizing current level of students' knowledge and their readiness for planned learning activities (4)	20. 3.56	17. 3.68	17. 2.24

Making a decision on ways of checking and assessing students' learning outcomes before the teaching starts (7)	21. 3.52	18. – 19. 3.67	22. 2.12
Maintaining order in case of unforeseen situation as well (25)	22. 3.51	23. – 24. 3.51	23. 2.03
Planning assessment of students' learning outcomes to be in relation with specific objectives of teaching (10)	23. 3.47	21. 3.57	21. 2.17
Monitoring activities in the classroom and stipulating or changing seating plan to be optimal for fulfilling objectives (21)	24. 3.35	25. 3.42	24. 2.00
Preparing machines, materials, instruments, didactical technique (e.g. overhead projector, interactive whiteboard, etc.) and checking their functionality for using during instruction (14)	25. 3.33	22. 3.54	25. 1.98
Preparing and maintaining bulletin boards showing students' works, news, graphs and posters supporting learning (15)	26 2.82	26. 2.89	26. 1.61
1. – 10.		11. – 20.	21. – 26.

Assessing professional activities in the field of *Instruction itself*

Assessing time consumption of professional activities

The activity with the highest rating achieves an average value of 2.56 (i.e. averagely or very time consuming) whereas the activity with the lowest rating has a value of 1.72 (i.e. averagely time consuming).

It means that most of activities are assessed by respondents as around average, or the interval between values 1.5 and 2.49 (*An average time devoted to the activity*) incorporates 95% of items. The results suggest

that most of assessed activities are distributed evenly from the respondents' point of view.

Only one professional activity is put into category *Plenty of time devoted to the activity/relatively plenty of time devoted to the activity*:

- *Organizing activities of students in the classroom in such a way that enable them to achieve the best outcomes possible* (average 2.56 points).

The remaining professional activities are placed in interval *An average time devoted to the activity*.

Table 10: Assessing time consumption of professional activities in the field of *Instruction itself*

Serial no.	Activities (number of the question in the questionnaire)	Time consuming
1.	Organizing activities of students in the classroom in such a way that enable them to achieve the best outcomes possible (27)	2.56
2.	Guiding students towards developing higher level thinking skills (e.g. problem solving, creativity) (32)	2.48
3.	Monitoring instruction and adapting it to students' needs (29)	2.45
4. – 5.	Supporting students according to their individual needs (30)	2.42
4. – 5.	Facilitating students' learning using interactive teaching strategies (e.g. reacting to their behavior, asking and answering questions, assessing students' reactions) (33)	2.42
6.	Providing students with opportunities to use what they have learned (34)	2.40
7.	Using diverse methods and forms of teaching including relating current subject matter to previous and future ones and referring to cross-curricular relations (44)	2.39
8.	Using diverse methods and forms of teaching, and various aids including presentations (e.g. lectures, discussions with examples, visual instructions) (36)	2.25
9.	Introducing students to a lesson and conveying them its objectives, importance of themes in order to support students' interests and motivations to learn (28)	2.23
10.	Using diverse methods and forms of teaching, and various aids including self-instruction (41)	2.14
11. – 12.	Ensuring individualisation of teaching for students with special educational needs (31)	2.13
11. – 12.	Using diverse methods and forms of teaching, and various aids including summarizing subject matter of every lesson (43)	2.13
13.	Using diverse methods and forms of teaching, and various aids including information technology (e.g. TV programmes, video recorders, and computer-supported instructions) (39)	2.07
14.	Using diverse methods and forms of teaching, and various aids including laboratory exercises and practical training (35)	2.02
15.	Using diverse methods and forms of teaching, and various aids including audio-visual aids (e.g. films, slides, overhead projectors) (38)	2.01
16.	Using diverse methods and forms of teaching, and various aids including sources in vicinity (e.g. study trips) (40)	1.86
17.	Using diverse methods and forms of teaching, and various aids including group interactive techniques (e.g. discussions in both smaller and bigger groups, panel discussions, debates, cooperative learning) (37)	1.85
18.	Using diverse methods and forms of teaching, and various aids including students' mutually learning (e.g. students' presentations, students' teaching, students' remedial classes) (42)	1.72
<i>Plenty of time/relatively plenty of devoted to the activity</i>		<i>An average time devoted to the activity</i>

Assessing importance of professional activities in the field of *Instruction itself* for respondents

The activity with the highest rating achieves an average value of 3.93 (i.e. the activity is important or very important) whereas the activity with the lowest rating has a value of 1.31 (i.e. the activity is not important). 60% of activities in the field of *Instruction itself* are put by respondents into category *The activity is important or very important*.

Assessing importance for beginning teachers according to respondents in the field of *Instruction itself*

The activity with the highest rating achieves an average value of 3.94 (i.e. the activity is very important) whereas the activity with the lowest rating has a value of 3.0 (i.e. the activity is averagely important for beginning teachers).

66% of activities in the field of *Instruction itself* are put by respondents into category *The activity is important or very important (for beginning teachers)*.

Comparing results in assessing importance for respondents and in assessing importance for beginning teachers

There are only small differences between assessing in the two dimensions, i.e. the activities are assessed as equally important for respondents themselves and for beginning teachers in respondents' views.

Comparing results in assessing time consumption and importance for respondents

There is a clear direct proportion between time consumption and importance, i.e. the important professional activities are more time consuming as well.

Table 11: Assessing importance of professional activities in the field of *Instruction itself*

Activities (number of the question in the questionnaire)	Serial no. (points below)		
	Assessing importance for respondents	Assessing importance for beginning teachers	Assessing time consumption
Guiding students towards developing higher level thinking skills (e.g. problem solving, creativity) (32)	1. 3.93	3. – 4. 3.83	2. 2.48
Organizing activities of students in the classroom in such a way that enable them to achieve the best outcomes possible (27)	2. – 3. 3.90	1. 3.94	1. 2.56
Supporting students according to their individual needs (30)	2. – 3. 3.90	5. 3.82	4. – 5. 2.42
Providing students with opportunities to use what they have learned (34)	4. 3.84	3. – 4. 3.83	6. 2.40
Monitoring instruction and adapting it to students' needs (29)	5. 3.83	2. 3.86	3. 2.45
Facilitating students' learning using interactive teaching strategies (e.g. reacting to their behavior, asking and answering questions, assessing students' reactions) (33)	6. 3.75	7. 3.69	4. – 5. 2.42
Introducing students to a lesson and conveying them its objectives, importance of themes in order to support students' interests and motivations to learn (28)	7. – 8. 3.74	6. 3.77	9. 2.23
Using diverse methods and forms of teaching, and various aids including relating current subject matter to previous and future ones and referring to cross-curricular relations (44)	7. – 8. 3.74	9. 3.64	7. 2.39
Ensuring individualisation of teaching for students with special educational needs (31)	9. 3.69	8. 3.66	11. – 12. 2.13
Using diverse methods and forms of teaching, and various aids including summarizing subject matter of every lesson (43)	10. 3.55	10. 3.58	11. – 12. 2.13
Using diverse methods and forms of teaching, and various aids including presentations (e.g. lectures, discussions with examples, visual instructions) (36)	11. 3.54	11. 3.53	8. 2.25
Using diverse methods and forms of teaching, and various aids including self-instruction (41)	12. 3.49	12. 3.51	10. 2.14
Using diverse methods and forms of teaching, and various aids including laboratory exercises and practical training (35)	13. 3.37	13. 3.49	14. 2.02
Using diverse methods and forms of teaching, and various aids including information technology (e.g. TV programmes, video recorders, and computer-supported instructions) (39)	14. 3.33	14. 3.38	13. 2.07
Using diverse methods and forms of teaching, and various aids including audio-visual aids (e.g. films, slides, over-head projectors) (38)	15. 3.25	15. 3.30	15. 2.01
Using diverse methods and forms of teaching, and various aids including sources in vicinity (e.g. study trips) (40)	16. 3.20	17. 3.11	16. 1.86
Using diverse methods and forms of teaching, and various aids including group interactive techniques (e.g. discussions in both smaller and bigger groups, panel discussions, debates, cooperative learning) (37)	17. 3.16	16. 3.15	17. 1.85
Using diverse methods and forms of teaching, and various aids including students' mutually learning (e.g. students' presentations, students' teaching, students' remedial classes) (42)	18. 3.05	18. 3.00	18. 1.72
1. – 10.		11. – 18.	

Assessing professional activities in the field of Assessment of both students' learning outcomes and efficiency of teaching

Assessing time consumption of professional activities

The activity with the highest rating achieves an average value of 2.47 (i.e. averagely time consuming) whereas

the activity with the lowest rating has a value of 1.31 (i.e. little time consuming).

It means that most of activities are assessed by respondents as around average, or the interval between values 1.5 and 2.49 (*An average time devoted to the activity*) incorporates 90% of items. The results suggest that most of assessed activities are distributed evenly from the respondents' point of view.

Table 12: Assessing time consumption of professional activities in the field of Assessment of both students' learning outcomes and efficiency of teaching

Serial no.	Activities (number of the question in the questionnaire)	Time consuming
1.	Awarding points, classifying, recording results and giving feed back on both oral and written examinations, tests, essays, and projects (47)	2.47
2.	Giving students reasons for the results assessing their work and behavior (51)	2.42
3.	Setting students tasks, longer and shorter tests in order to channel their study, to find out their performance and to assess efficiency of teaching (45)	2.33
4. – 5.	Keeping and using records on students (e.g. school attendance, tests results, participation during class, finished projects, homework) (50)	2.27
4. – 5.	Making decisions on possible modification of teaching based on students' outcomes (54)	2.27
6. – 7.	Monitoring and recording students' progress in acquisition of knowledge (49)	2.26
6. – 7.	Finding out and analysing strengths and weaknesses of students on the base of examination results and monitoring student activities (53)	2.26
8.	Making students aware of their mistakes in mother tongue (speaking, reading, writing) and removing them (48)	1.99
9.	Giving parents reasons for the results of student assessment (52)	1.98
10.	Setting, collecting, correcting and marking homework (46)	1.93
11.	Interpreting results of national and regional surveys of educational outcomes and conveying them to students and/or parents (55)	1.31
<i>An average time devoted to the activity</i>		
<i>Little time devoted to the activity</i>		

Assessing importance of professional activities in the field of Assessment of both students' learning outcomes and efficiency of teaching for respondents

The activity with the highest rating achieves an average value of 3.86 (i.e. the activity is important or very important) whereas the activity with the lowest rating has a value of 2.33 (i.e. the activity is a little important).

More than 60% of activities are put by respondents into category *The activity is important or very important*.

Assessing importance for beginning teachers according to respondents

The activity with the highest rating achieves an average value of 3.86 (i.e. the activity is important or very important) whereas the activity with the lowest rating has a value of 3.23 (i.e. the activity is averagely important for beginning teachers).

More than 60% of activities are put by respondents into category *The activity is important or very important (for beginning teachers)*.

Comparing results in assessing importance for respondents and in assessing importance for beginning teachers

There are only small differences between assessing in the two dimensions, i.e. the activities are assessed as equally important for respondents themselves and for beginning teachers in respondents' views.

Comparing results in assessing time consumption and importance for respondents

In principle, there is a direct proportion between time consumption and importance, i.e. the important professional activities are more time consuming as well.

Table 13: Assessing importance of professional activities in the field of Assessment of both students' learning outcomes and efficiency of teaching

Activities (number of the question in the questionnaire)	Serial no. (points below)		
	Assessing importance for respondents	Assessing importance for beginning teachers	Assessing time consumption
Giving students reasons for the results assessing their work and behavior (51)	1. 3.86	2. 3.82	2. 2.42

Awarding points, classifying, recording results and giving feed back on both oral and written examinations, tests, essays, and projects (47)	2. 3.85	1. 3.86	1. 2.47
Monitoring and recording students' progress in acquisition of knowledge (49)	3. 3.69	3. 3.65	6. – 7. 2.26
Setting students tasks, longer and shorter tests in order to channel their study, to find out their performance and to assess efficiency of teaching (45)	4. 3.63	4. 3.62	3. 2.33
Finding out and analysing strengths and weaknesses of students on the base of examination results and monitoring student activities (53)	5. 3.60	7. 3.57	6. – 7. 2.26
Making decisions on possible modification of teaching based on students' outcomes (54)	6. 3.57	5. 3.61	4. – 5. 2.27
Keeping and using records on students (e.g. school attendance, tests results, participation during class, finished projects, homework) (50)	7. 3.55	6. 3.59	4. – 5. 2.27
Making students aware of their mistakes in mother tongue (speaking, reading, writing) and removing them (48)	8. 3.44	10. 3.36	8. 1.99
Giving parents reasons for the results of student assessment (52)	9. 3.43	8. 3.44	9. 1.98
Setting, collecting, correcting and marking homework (46)	10. 3.17	11. 3.23	10. 1.93
Interpreting results of national and regional surveys of educational outcomes and conveying them to students and/or parents (55)	11. 2.33	9. 2.38	11. 1.31
1. – 10.		11.	

Assessing professional activities in the field of *Teacher activities in addition to teaching*

Assessing time consumption of professional activities

The activity with the highest rating achieves an average value of 2.5 (i.e. very time consuming) whereas the activity with the lowest rating has a value of 1.07 (i.e. very little time consuming).

It means that most of activities are assessed by respondents as around average, or the interval between values 1.5 and 2.49 (*An average time devoted to the*

activity) incorporates more than 80% of items. The results suggest that most of assessed activities are distributed evenly from the respondents' point of view.

Only one professional activity is put into category *Plenty of time devoted to the activity/relatively plenty of time devoted to the activity*:

- *Highlighting and supporting right cultural and social behavior of students (e.g. respecting others, decency, racial tolerance and social considerations including students with different cultural background) and being an example to students (59).*

Table 14: Assessing time consumption of professional activities in the field of *Teacher activities in addition to teaching*

Serial no.	Activities (number of the question in the questionnaire)	Time consuming
1.	Highlighting and supporting right cultural and social behavior of students (e.g. respecting others, decency, racial tolerance and social considerations including students with different cultural background) and being an example to students (59)	2.50
2.	Fulfilling administrative duties (keeping class register and record books, etc.) (67)	2.46
3.	Participating actively in operational and pedagogical meetings, parent-teacher and school council meetings (58)	2.43
4.	Recognizing student physical and mental problems as well as learning problems and asking for expert help if necessary (65)	2.25
5.	Supporting development of adequate self-assessment of students (60)	2.20
6. – 7.	Informing students, possibly parents about school rules (57)	2.15
6. – 7.	Helping with prevention of damage to school property (72)	2.15
8. – 9.	Channeling students' behavior outside classrooms, e.g. in school canteen, hall, corridors, etc., and ensuring order and safety (64)	2.07
8. – 9.	Following information on state of health of students (74)	2.07
10.	Being in charge of technical classrooms, laboratories, teaching aids (68)	2.03
11.	Judging cosiness and safety of classrooms and school environment, and reporting shortcomings if necessary (71)	1.93
12. – 13.	Keeping students under supervision during out-of-school activities (e.g. going to the cinema/theater, excursions, ski training courses, etc.) (63)	1.92
12. – 13.	Reporting vandalistic acts, damaging or loss of school property (73)	1.92
14.	Proposing purchase of teaching materials and aids (70)	1.91
15.	Charging students with suitable classroom duties that facilitate instruction (62)	1.86
16.	Taking part in school or community activities after teaching hours (78)	1.78
17.	Reporting suspicion of negligence and/or abusing students to authority in charge (66)	1.75

18. – 19.	Being interested in regional and national goals of educational policy (75)	1.67	
18. – 19.	Taking responsibility for safety while collecting and handing over money intended for teaching and extracurricular activities (76)	1.67	
20.	Preparing and formulating reports that characterized personality of students either at the end of an educational period or on request of other institutions (e.g. social services) (61)	1.56	
21.	Coordinating extracurricular activities of students (77)	1.37	
22.	Setting regional and/or national tests and supervising while students are sitting the tests (56)	1.15	
23.	Maintaining computer classrooms and networks (69)	1.07	
	<i>Plenty of time/relatively plenty of devoted to the activity</i>	<i>An average time devoted to the activity</i>	<i>Little time devoted to the activity</i>

Assessing importance of professional activities in the field of *Teacher activities in addition to teaching*

The activity with the highest rating achieves an average value of 4.01 (i.e. the activity is very important) whereas the activity with the lowest rating has a value of 2.1 (i.e. the activity is a little important).

35% of activities in the field of *Teacher activities in addition to teaching* are put by respondents into category *The activity is important or very important* and 50% of them into category *The activity is averagely important*.

Assessing importance for beginning teachers according to respondents in the field of *Teacher activities in addition to teaching*

The activity with the highest rating achieves an average value of 3.97 (i.e. the activity is very important) whereas

the activity with the lowest rating has a value of 2.18 (i.e. the activity is averagely important).

Comparing results in assessing importance for respondents and in assessing importance for beginning teachers

There are only small differences between assessing in the two dimensions, i.e. the activities are assessed as equally important for respondents themselves and for beginning teachers in respondents' views.

Comparing results in assessing time consumption and importance for respondents

In principle, there is a direct proportion between time consumption and importance, i.e. the important professional activities are more time consuming as well.

Table 15: Assessing importance of professional activities in the field of *Teacher activities in addition to teaching*

Activities (number of the question in the questionnaire)	Serial no. (points below)		
	Assessing importance for respondents	Assessing importance for beginning teachers	Assessing time consumption
Highlighting and supporting right cultural and social behavior of students (e.g. respecting others, decency, racial tolerance and social considerations including students with different cultural background) and being an example to students (59)	1. 4.01	1. 3.97	1. 2.50
Recognizing student physical and mental problems as well as learning problems and asking for expert help if necessary (65)	2. 3.75	3. 3.69	4. 2.25
Participating actively in operational and pedagogical meetings, parent-teacher and school council meetings (58)	3. 3.67	2. 3.70	3. 2.43
Helping with prevention of damage to school property (72)	4. 3.67	5. 3.53	6. – 7. 2.15
Informing students, possibly parents about school rules (57)	5. 3.62	4. 3.56	6. – 7. 2.15
Supporting development of adequate self-assessment of students (60)	6. 3.60	7. – 8. 3.50	5. 2.20
Following information on state of health of students (74)	7. 3.60	7. – 8. 3.50	8. – 9. 2.07
Reporting vandalistic acts, damaging or loss of school property (73)	8 3.52	6. 3.52	12. – 13. 1.92
Reporting suspicion of negligence and/or abusing students to authority in charge (66)	9. 3.49	10. 3.47	17. 1.75
Channeling students' behavior outside classrooms, e.g. in school canteen, hall, corridors, etc., and ensuring order and safety (64)	10. 3.47	11. 3.44	8. – 9. 2.07
Fulfilling administrative duties (keeping class register and record books, etc.) (67)	11. 3.43	9. 3.48	2. 2.46
Keeping students under supervision during out-of-school activities (e.g. going to the cinema/theater, excursions, ski training courses, etc.) (63)	12. 3.35	12. 3.37	12. – 13. 1.92
Proposing purchase of teaching materials and aids (70)	13. 3.32	15. 2.99	14. 1.91

Judging cosiness and safety of classrooms and school environment, and reporting shortcomings if necessary (71)	14. 3.30	13. 3.18	11. 1.93
Being in charge of technical classrooms, laboratories, teaching aids (68)	15. 3.12	14. 3.01	10. 2.03
Charging students with suitable classroom duties that facilitate instruction (62)	16. 3.05	16. 2.98	15. 1.86
Taking part in school or community activities after teaching hours (78)	17. 2.97	17. 2.93	16. 1.78
Being interested in regional and national goals of educational policy (75)	18. 2.91	19. 2.76	18. – 19. 1.67
Taking responsibility for safety while collecting and handing over money intended for teaching and extracurricular activities (76)	19. 2.80	18. 2.81	18. – 19. 1.67
Preparing and formulating reports that characterized personality of students either at the end of an educational period or on request of other institutions (e.g. social services) (61)	20. 2.74	20. 2.68	20. 1.56
Coordinating extracurricular activities of students (77)	21. 2.43	21. 2.57	21. 1.37
Setting regional and/or national tests and supervising while students are sitting the tests (56)	22. 2.12	23. 2.18	22. 1.15
Maintaining computer classrooms and networks (69)	23. 2.10	22. 2.28	23. 1.07
	1. – 10.	11. – 20.	21. – 23.

Assessing professional activities in the field of *Other activities connected with teaching profession*

Assessing time consumption of professional activities

The activity with the highest rating achieves an average value of 2.23 (i.e. averagely time consuming) whereas

the activity with the lowest rating has a value of 1.43 (i.e. little time consuming).

It means that most of activities are assessed by respondents as around average, or the interval between values 1.5 and 2.49 (*An average time devoted to the activity*) incorporates almost all activities in the field.

Table 16: Assessing time consumption of professional activities in the field of *Other activities connected with teaching profession*

Serial no.	Activities (number of the question in the questionnaire)	Time consuming
1.	Cooperating with colleagues in developing school educational programmes, in choosing teaching methods, etc. (80)	2.33
2.	Cooperating with colleagues on coordination of subject matter, cross-curricular relations and teaching methods (81)	2.30
3.	Keeping themselves up to date with developments in pedagogy, psychology and their teaching qualification (79)	2.19
4.	Helping beginning teachers in their work and students of teaching during their practice (83)	1.65
5.	Participating in various school and teaching organizations (82)	1.43
	<i>An average time devoted to the activity</i>	<i>Little time devoted to the activity</i>

Assessing importance of professional activities in the field of *Other activities connected with teaching profession for respondents*

The activity with the highest rating achieves an average value of 3.72 (i.e. the activity is very important) whereas the activity with the lowest rating has a value of 2.54 (i.e. the activity is averagely important).

85% of activities in the field of *Other activities connected with teaching profession* are put by respondents into category *The activity is important or very important*. Four activities are assessed as *averagely* important.

Assessing importance for beginning teachers according to respondents in the field of *Other activities connected with teaching profession*

The activity with the highest rating achieves an average value of 3.67 (i.e. the activity is important) whereas the

activity with the lowest rating has a value of 2.61 (i.e. the activity is averagely important).

Comparing results in assessing importance for respondents and in assessing importance for beginning teachers

There are only small differences between assessing in the two dimensions, i.e. the activities are assessed as equally important for respondents themselves and for beginning teachers in respondents' views.

Comparing results in assessing time consumption and importance for respondents

In principle, there is a direct proportion between time consumption and importance, i.e. the important professional activities are more time consuming as well.

Table 17: Assessing importance of professional activities in the field of *Other activities connected with teaching profession*

Activities (number of the question in the questionnaire)	Serial no. (points below)		
	Assessing importance for respondents	Assessing importance for beginning teachers	Assessing time consumption
Cooperating with colleagues on coordination of subject matter, cross-curricular relations and teaching methods (81)	1. 3.72	1. 3.67	2. 2.30
Cooperating with colleagues in developing school educational programmes, in choosing teaching methods, etc. (80)	2. 3.68	2. 3.64	1. 2.33
Keeping themselves up to date with developments in pedagogy, psychology and their teaching qualification (79)	3. 3.60	3. 3.56	3. 2.19
Helping beginning teachers in their work and students of teaching during their practice (83)	4. 3.22	4. 2.73	4. 1.65
Participating in various school and teaching organizations (82)	5. 2.54	5. 2.61	5. 1.43
1. – 3.	4. – 5.		

Summary

Most of respondents express their opinion that items of the questionnaire are relevant to their job descriptions. Therefore we can assume that professional activities assessed by teachers are reflecting reality to a large extent. In that case, results of the survey can be considered as a picture of the real structure consisted of professional activities executed by secondary school teachers in the period of time.

From the standpoint of time consumption, respondents assess most of items as averagely time consuming. Three professional activities are labeled as more time consuming namely: *Following students' behavior in the classroom (i.e. keeping eye contact, monitoring movement) and through this supporting effort of students to achieve the best outcomes possible* (average 2.56 points); *Organizing activities of students in the classroom in such a way that enable them to achieve the best outcomes possible* (average 2.56 points); *Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes)* (average 2.54 points).

From the standpoint of importance for respondents, most of activities are assessed as important and very important. The three most important activities for respondents themselves are: *Highlighting and supporting right cultural and social behavior of students (e.g. respecting others, decency, racial tolerance and social considerations including students with different cultural background) and being an example to students* (4.01); *Praising and encouraging desirable behavior of students* (4); *Ensuring adherence to safety rules and monitoring*

proper and safe condition and operation of machines, aids, instruments, equipment and materials using by students (3.96).

For beginning teachers, most of professional activities are assessed by respondents as important and very important. The three most important activities for beginning teachers are: *Studying thoroughly approved curriculum of a subject and stipulating goals for the subject in the grade* (4.18); *Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives* (4.03); *Choosing and looking through materials suitable for instruction (e.g. textbooks, workbooks, recommended reading, links to web pages, computer programmes)* (4.02).

The survey reveals that there is more or less direct proportion between assessing importance of professional activities and their time consumption, i.e. the important activities are more time consuming as well.

In addition, the survey shows that assessed rate of importance for respondents (see *Characteristics of respondents*, p. 1-2) is mostly the same as for beginning teachers. Only few activities are considered by respondents as distinctive more important for beginning teachers, for example: *Studying thoroughly approved curriculum of a subject and stipulating objectives for the subject in the grade; Lesson planning including specific objectives, teaching strategies and students' assessment; Specifying general objectives of a subject into particular objectives of the subject for the grade; Delimiting the adequate content of instruction, teaching aids and methods based on an analysis of the subject objectives.*



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