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Results Survey for Teachers from VECC "Riga State Technical School" in Latvia

The survey for teachers has been filled out by 61 teachers from VECC "Riga State Technical School", Latvia. The survey aims to assess the teaching quality of education and applied educational tools, techniques, methods in the classes. The information collected was used for a gathering of general data and was anonymous.

1. The teachers were asked to indicate - how often do they use interactive tools (images, videos, quizzes, graphics etc.), when they teach?

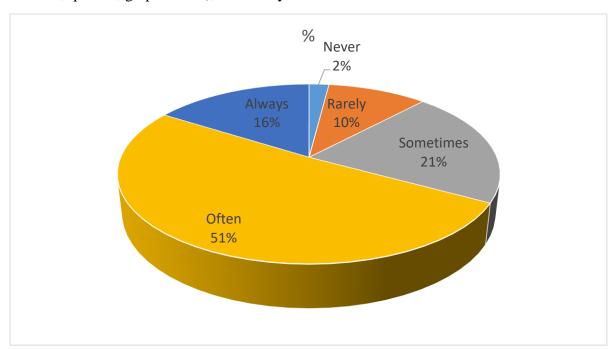


Figure 1. The use of interactive tools.

Table 1

	Teachers' responses (%)
Never	2
Rarely	10
Sometimes	21
Often	51
Always	16







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Numbers (see Figure 1) show an overall good level of usage of interactive tools in the teaching process what is positive to the educational process and school. The majority of teachers (51%) <u>often</u> use interactive tools, 21% of respondents <u>sometimes</u> use and 16% <u>always</u> use interactive tools. This implies that the rest teachers (12%) use interactive tools rarely or never.

2. The teachers were also asked to answer - in their experience, to what extent the use of interactive tools increases the interest of the students for the lesson.

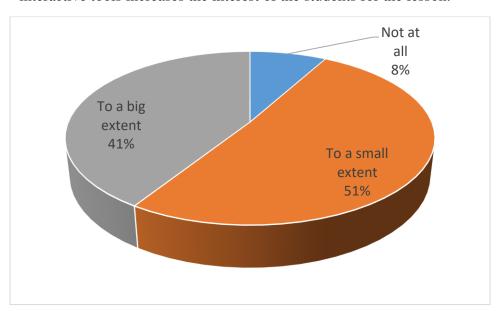


Figure 2. The extent of use of interactive tools.

Table 2

	Teachers' responses (%)
Not at all	8
To a small extent	51
To a big extent	41

41% of respondents indicated that the use of interactive tools increases the interest of the students to a big extent for the lesson, 51% of respondents —to a small extent, and 8% of respondents —not at all. In general, teachers believe that the usage of different interactive tools increases the interest of the students in the lesson.







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3. The teachers were also asked to answer- do they think that some educational techniques (working in pairs/groups, case study, role play, questions/ answers, discussion, presentation, research etc.), are more suitable for a specific teaching method?

Table 3

	Face to face teaching		Distance learning			Blended teaching			
	Not at all (%)	To a small extent (%)	To a big extent (%)	Not at all (%)	To a small extent (%)	To a big extent (%)	Not at all (%)	To a small extent (%)	To a big extent (%)
Working in pairs/groups	0	28	72	2	31	67	5	27	68
Case study	7	73	20	6	42	52	9	49	42
Role play	2	61	37	18	51	31	22	53	25
Questions/answers	0	12	88	0	23	77	0	21	79
Discussion	0	9	91	0	26	74	0	24	76
Presentation	1	37	62	1	36	63	1	32	67
Research	2	39	59	3	35	62	2	24	74

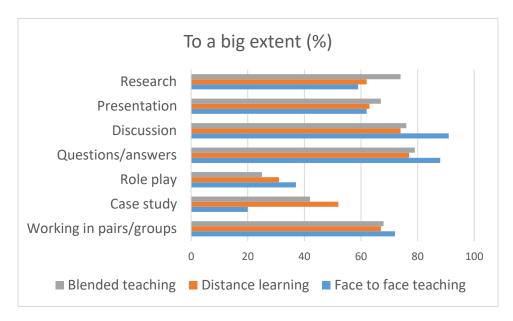


Figure 3.1. Teachers' responses regarding the most suitable educational techniques (to a big extent) for a specific teaching method.

Analyzing teachers' responses (*Figure 3.1.*) we can see that research as an educational technique is more suitable in blended teaching, presentation is more suitable almost in all teaching methods. Discussions, questions/answers, and role-play are more useful in face-to-face teaching. A case study is more suitable for distance learning. Working in pairs/groups as an educational technique is suitable in all teaching methods.







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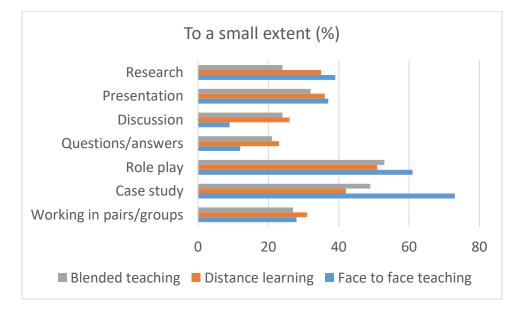


Figure 3.2. Teachers' responses regarding the suitable (to a small extent) educational techniques for a specific teaching method.

According to data (*Table 3*) 28% of respondents indicated <u>research</u> as an educational technique suitable to a small extent in the face to face teaching, 31% of respondents indicated it in distance learning, and 27% -in blended teaching.

37% of respondents indicated *presentation* as an educational technique suitable to a small extent in the face to face teaching, 36% of respondents indicated it in distance learning, and 32% -in blended teaching.

9% of respondents indicated <u>discussions</u> as an educational technique suitable to a small extent in face-to-face teaching, 26% of respondents indicated it in distance learning, and 24% - in blended teaching.

12% of respondents indicated *questions/answers* as an educational technique suitable to a small extent in face to face teaching, 23% of respondents indicated it in distance learning, and 21% - in blended teaching.

61% of respondents indicated <u>role play</u> as an educational technique suitable to a small extent in face to face teaching, 51% of respondents indicated it in distance learning, and 53% - in blended teaching.

73% of respondents indicated <u>case study</u> as an educational technique suitable to a small extent in face to face teaching, 42% of respondents indicated it in distance learning, and 49% - in blended teaching.

28% of respondents indicated <u>working in pairs/groups</u> as an educational technique suitable to a small extent in face to face teaching, 31% of respondents indicated it in distance learning, and 27%- in blended teaching.







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Most teachers think that all educational techniques are suitable for a specific teaching method. There is an insignificant percentage of surveyed teachers who marked some educational technique which is not at all suitable: 22% of respondents indicated role play as not at all suitable for blended teaching and 18% of respondents indicated role play as not at all suitable for distance learning. The most appropriate educational techniques for the face to face teaching are the following: working in pairs/groups (72 % of respondents), questions/answers (88 % of respondents), discussion (91 % of respondents), research (59 % of respondents).

The most appropriate educational techniques for distance learning are all above mentioned educational techniques except role play.

The most appropriate educational techniques for blended teaching are the following educational techniques: pairs/groups (68 % of respondents), questions/answers (79 % of respondents), discussion (76 % of respondents), presentation (67 % of respondents), and research (74 % of respondents).

4. The next questions measure - how often do teachers assign homework to their students when teaching in person?

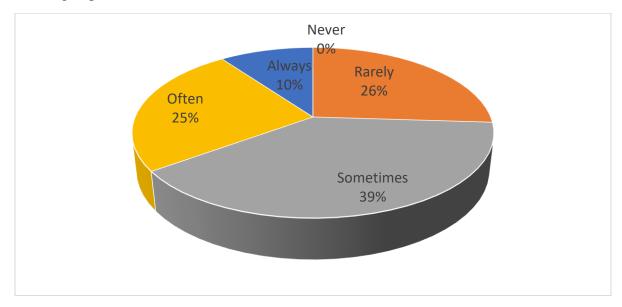


Figure 4. The assignments of homework.







Table 4

	Teachers' responses (%)
Never	0
Rarely	26
Sometimes	39
Often	25
Always	10

- 39 % of respondents assign homework sometimes. Teachers who assign homework often (25%) and always (10%) form together 35% and it is still less than 39 % of respondents who assign homework sometimes. There are 26% of respondents who assign homework rarely.
- 5. The teachers were asked to indicate have they ever conducted a lesson through the use of online platforms (e-learning)?

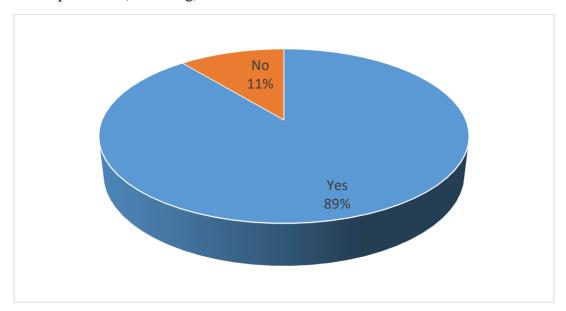


Figure 5. The use of online platforms.

Table 5

	Teachers' responses (%)
Yes	89
No	11







The majority of surveyed teachers (89%) answered yes and only 11% of respondents are not using online platforms (e-learning).

6. The teachers were also asked - how often do they suggest to their students to use the internet for the purposes of research and finding information?

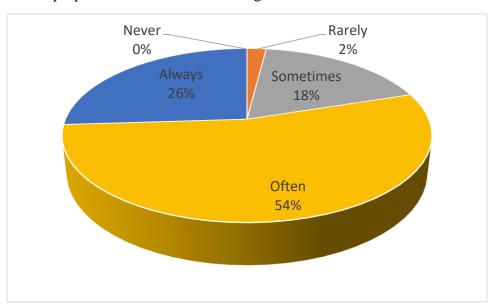


Figure 6. The use of the internet for the purposes of research and finding information.

Table 6

	Teachers' responses (%)
Never	0
Rarely	2
Sometimes	18
Often	54
Always	26

The majority of teachers are suggesting to their students to use the internet for the purposes of research and finding information. 26% of respondents –always and 54% of respondents – often. Together it forms 80%. Only 18% of respondents sometimes suggest to their students to use the internet for the purposes of research and finding information. It can be concluded that teachers and students more and more use the internet for the purposes of research and finding information acquiring some theme of the subject.







7. The teachers were also asked - do they use practical examples in their lessons?

Table 7

	Teachers' responses (%)
Yes	98
No	2

Almost all surveyed teachers (98%) use practical examples in their lessons. The conclusion is practical examples in lessons are an essential component of the teaching and learning process. The practical examples can be very useful for students developing a better understanding of necessary topics in the lessons, as well it can create an understandable connection between theory and a real-life situation.

8. The next questions measure - how important do you consider the collaboration between the students during the learning/teaching process?

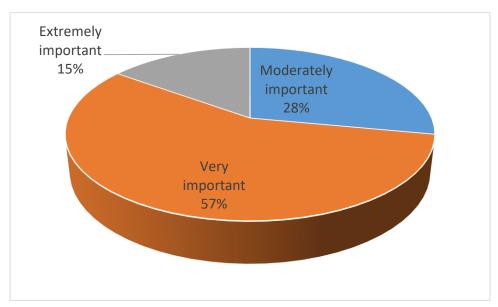


Figure 8. The collaboration between the students during the learning/teaching process.







Table 8

	Teachers' responses (%)
Not at all important	0
Slightly important	0
Moderately important	28
Very important	57
Extremely important	15

The majority of teachers indicated that the collaboration between the students during the learning/teaching process is very important for 57 % of respondents, extremely important for 15 % of respondents as well 28 % of respondents indicated collaboration between the students during the learning/teaching process as moderately important. Teachers know that collaboration and cooperation skills are necessary for students 'lives and in the labor market. The soft skills of students or called "Human skills" are becoming more important nowadays.

9. The teachers were also asked - do they assign to their students projects, where teamwork is involved, to develop their collaborative skills?

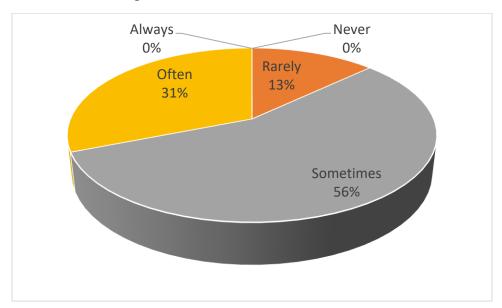


Figure 9. The development of the collaborative skills.







Table 9

	Teachers' responses (%)
Never	0
Rarely	13
Sometimes	56
Often	31
Always	0

Only 31% of respondents assign <u>often</u> to their students projects, where teamwork is involved, to develop their collaborative skills. Teachers know that collaboration and cooperation skills are necessary for students, nevertheless, 56% of surveyed teachers assign <u>sometimes</u> to their students projects where teamwork is involved, to develop their collaborative skills, 13% -rarely.

10. The next questions measure - which teaching method (blended, asynchronous distance learning, synchronous distance learning, teaching in-person) do teachers think that encourages the most students to participate more actively?

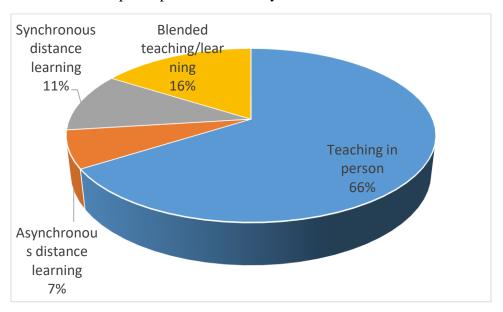


Figure 9. The teaching method and students participation level.







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Table 10

	Teachers' responses (%)
Teaching in person	66
Asynchronous distance learning	7
Synchronous distance learning	11
Blended teaching/learning	16

According to data, 66% of respondents are sure that teaching in person encourages the most students to participate more actively, 16% of respondents think that blended teaching/learning could encourage the most students to participate more actively, 11% of respondents - synchronous distance learning and 7% of respondents- asynchronous distance learning encourages the most students to participate more actively. Data analysis underlines the teaching in person method as one of the most suitable as well blended teaching/learning and synchronous distance learning as a method has the potential.

11. The teachers were asked - do teachers ask for feedback from their students regarding their teaching methods and their effectiveness?

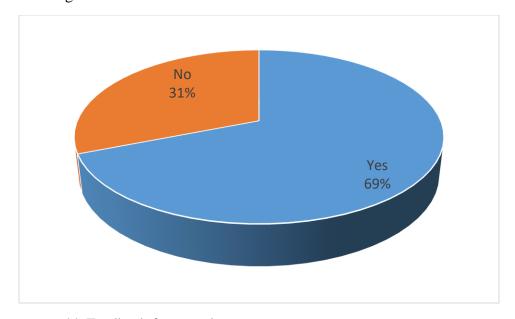


Figure 11. Feedback from students.

Table 11

	Teachers' responses (%)
Yes	69
No	31







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69% of respondents answered positively and 31% of respondents are not interested to get feedback from their students regarding their teaching methods and their effectiveness. For the largest part of surveyed teachers, it is important to get feedback from students what helps them to get some reflection on how are they teaching and using teaching methods in the lessons as well to make some adjustments to make better progress in their teaching.

12. The teachers were asked - how important do they consider the personal contact between teachers and students during the learning/teaching process?

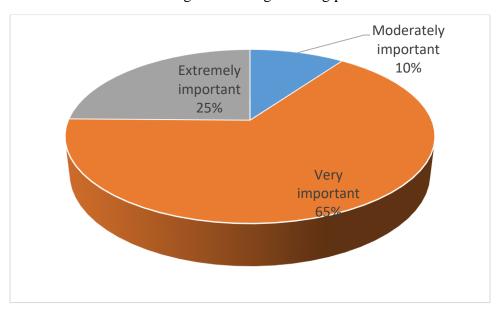


Figure 12. Personal contact between teachers and students during the learning/teaching process

Table 12

	Teachers' responses (%)
Not at all important	0
Slightly important	0
Moderately important	10
Very important	66
Extremely important	25

66% of respondents indicated that personal contact between teachers and students during the learning/teaching process is very important and 25 of respondents indicated that it is extremely important as well 10 % of respondents indicated - it is moderately important. Teachers know from their experience: good personal contact between teachers and students creates a healthy environment for good education.







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13. The next questions measure - do teachers think that it is possible to combine teaching/learning in person with distance teaching/learning?

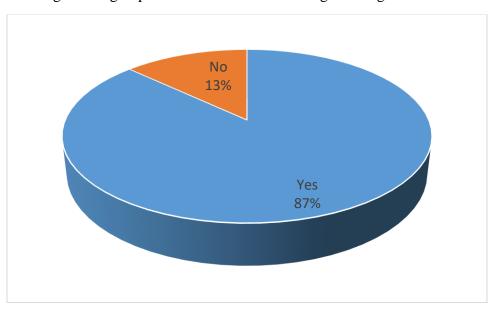


Figure 13. Possibility to combine teaching/learning in person with distance teaching/learning

Table 13

	Teachers' responses (%)
Yes	87
No	13

Most teachers (87%) think that it is possible to combine teaching/learning in person with distance teaching/learning and only 13% of respondents don't think so.

14. The next questions measure -to what extent do teachers know how to blend (merge) together the individual ingredients of blended teaching (face to face teaching, online teaching, the use of various interactive tools in the class, independent study, simulations, assessment and feedback, one on one coaching) to make the blended lesson consistent and effective?







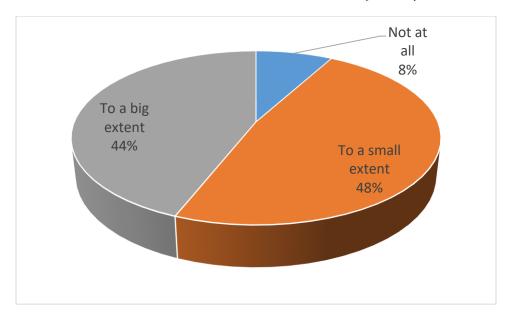


Figure 14. Understanding of blending together the individual ingredients of blended teaching.

Table 14

	Teachers' responses (%)
Not at all	8
To a small extent	48
To a big extent	44

Generally teachers know about blending together the individual ingredients of blended teaching to make the blended lesson consistent and effective. 44 % of respondents indicated that they know to a big extent, 48 % of respondents - to a small extent. Only 8% of surveyed teachers don't know how to blend (merge) together the individual ingredients of blended teaching to make the blended lesson consistent and effective.







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15. The teachers were also asked - do they need training on how to make lessons based on blended teaching?

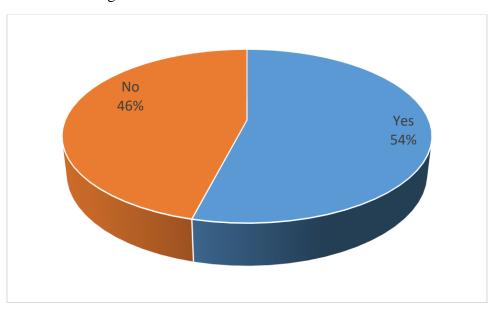


Figure 15. The need for training on how to make lessons based on blended teaching

Table 15

	Teachers' responses (%)
Yes	54
No	46

The largest part of respondents (54%) noted that they need training on how to make lessons based on blended teaching and the smallest part of respondents (46%) noted that they do not need training on how to make lessons based on blended teaching.







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16. The teachers were also asked - if teachers had to design a blended teaching/learning course, what per cent would it be in person, and what per cent would it be online – distance?

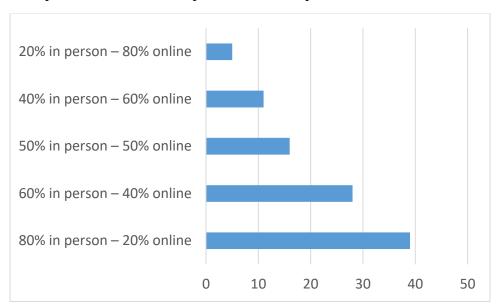


Figure 16. Percentage of the division of a blended teaching/learning course

Table 16

	Teachers' responses (%)
80% in person – 20% online	39
60% in person – 40% online	28
50% in person – 50% online	16
40% in person – 60% online	11
20% in person – 80% online	5

According with figure 16 we can see that majority of surveyed teachers would like to teach students more in person and less in online. 39 % of surveyed teachers are willing to teach 80% in person – 20% online; 28 % of surveyed teachers (60% in person – 40% online). We can conclude that 67% of surveyed teachers (39%+28%) would like to deliver lectures more than half time of lessons in real classes with students.

16 % of surveyed teachers are willing to teach students 50% in person -50% online. 11 % of surveyed teachers (40% in person -60% online) and 5 % of surveyed teachers (20% in person -80% online).







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17. The teachers were also asked - in their opinion, being able to attend a course at his/her own time and convenience (time, place, path, pace), improves a students' performance and efficiency?

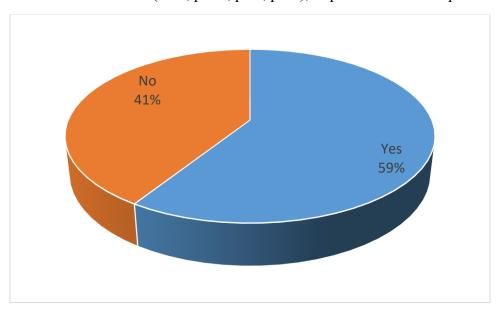


Figure 17. The attendance of a course at his/her own time and convenience

Table 17

	Teachers' responses (%)
Yes	59
No	41

59% of surveyed teachers think that possibility for students to attend a course at his/her own time and convenience (time, place, path, pace), could improve the students' performance and efficiency. 41% of surveyed teachers – disagree.







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18. The teachers were also asked -do they think that distance education reduces the role of the teacher in the educational process?

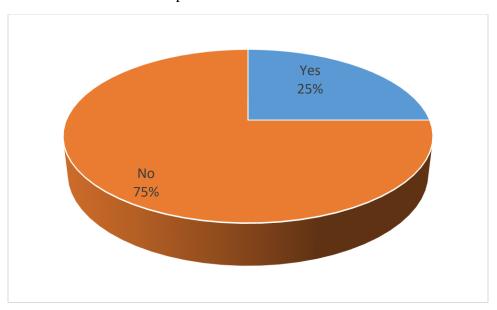


Figure 18. The distance education and the role of the teacher in the educational process

Table 18

	Teachers' responses (%)
Yes	25
No	75

75 % of respondents think that distance education does not reduce the role of the teacher in the educational process. Only 25 % of respondents think that distance education could reduce the role of the teacher in the educational process.







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19. The next questions measure -what factors do affect quality of educational process?

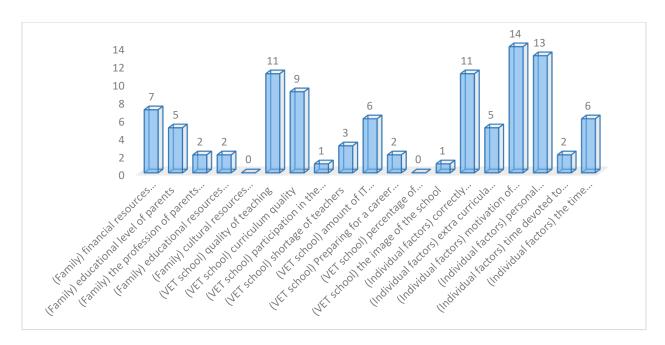


Figure 19. The factors affecting quality of educational process

Table 19

The main factors what affect quality of educational process	%
(Family) financial resources available to households/welfare resources available to	·
households	7
(Family) educational level of parents	5
(Family) the profession of parents is related to science/natural sciences	2
(Family) educational resources available to the households	2
(Family) cultural resources available to the households	0
(VET school) quality of teaching	11
(VET school) curriculum quality	9
(VET school) participation in the projects	1
(VET school) shortage of teachers	3
(VET school) amount of IT equipment, educational licenses for training in relation to the size	·
of the school preparing for a career in science at school	6
(VET school) Preparing for a career in science at school	2
(VET school) percentage of students - dropouts	0
(VET school) the image of the school	1







Riga State Technical School coordinate Erasmus+

Blended teaching and learning in VET schools

Strategic Partnership project "Blended teaching and learning in VET schools",

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(Individual factors) correctly chosen profession (student like what he/she learns)	11
(Individual factors) extra curricula activities concerning the chosen profession	5
(Individual factors) motivation of the students	14
(Individual factors) personal effectiveness	13
(Individual factors) time devoted to the acquisition of a profession at school	2
(Individual factors) the time devoted to the acquisition of the profession independently	6

According to table No.19, the educational process is affected mostly by individual factors (51% of respondents) and it is affected moderately by VET school factors (33 % of respondents). The family factors affect the educational process to a small extent (16 % of respondents).

Data of family factors reveals that the most important are the following family factors: *financial* resources available to households/welfare resources available to households and educational level of parents. Other family factors have an insignificant impact.

Analyzing VET school factors we can see that the most important factors are *quality of teaching* and curriculum quality. The next important factor is the amount of IT equipment, educational licenses for training in relation to the size of the school preparing for a career in science at school. Other VET school factors have an insignificant impact.

The teachers indicated that individual factors play the most important role in the educational process. The *motivation of students* (14 % of respondents) is crucial in the teaching and learning process what directly affects students' willingness to learn, their interest to learn, and their learning outcomes. *Personal effectiveness* (13 % of respondents) shows how much are students ready to be involved in the acquisition of new knowledge and skills, their capacity. *Correctly chosen profession (student like what he/she learns)* (11 % of respondents) is also a top factor. When a student learns profession what he/she likes it brings better results. *The time devoted to the acquisition of the profession independently* (6 % of respondents) shows students 'interest in their profession and time devoted to the acquisition of it independently besides formal education at VET school.

The teachers have noticed that there exists a direct relationship between individual factors and students' educational performance: on the whole, students with better motivation, personal effectiveness, students learn what they like (are interested in), students devote more time to the acquisition of the profession independently have higher educational performance than students with less motivation, personal effectiveness and less devoted time for the acquisition of the profession independently.

All the above-mentioned factors in Table 19 are affecting the educational process. Nevertheless, teachers did not indicate and did not mark the following 4 factors: (Family) cultural resources available to the households; (VET school) participation in the projects; (VET school) percentage of students – dropouts; (VET school) the image of the school (0% - 1% of respondents). Thus,







according to surveyed teachers, these factors have an insignificant and indirect impact on the educational process and educational results.

Conclusion:

- 1. The majority of teachers: 51% of respondents often and 16% always use interactive tools;
- 2. Surveyed teachers believe that the usage of different interactive tools increases the interest of the students for the lesson;
- 3. Teachers think that the most suitable educational techniques (to a big extent) for the specific teaching methods are the following: research as an educational technique is more suitable in blended teaching, presentation is more suitable almost in all teaching methods. Discussions, questions/answers, and role play are more useful in face to face teaching. A case study is more suitable in distance learning. Working in pairs/groups as an educational technique is suitable in all teaching methods.
- 4. The majority of teachers assign homework *sometimes* and *rarely*;
- 5. The majority of surveyed teachers have conducted the lessons through the use of online platforms (e-learning);
- 6. The majority of teachers (26% of respondents –always and 54% of respondents often) are suggesting to their students to use the internet for research and finding information;
- 7. Almost all surveyed teachers (98%) use practical examples in their lessons. The implementation of practical examples in lessons is an essential component of the teaching and learning process. The practical examples can be very useful for students developing a better understanding of necessary topics in the lessons, as well can create an understandable connection between theory and a real-life situation;
- 8. The majority of teachers indicated that the collaboration between the students during the learning/teaching process is *very important* for 57 % of respondents, *extremely important* for 15 % of respondents. Teachers know that collaboration skills are necessary for students 'lives and in labor market. Nevertheless, 56% of surveyed teachers assign *sometimes* to their students projects where teamwork is involved, to develop their collaborative skills, 13% of surveyed teachers assign to their students projects *rarely*.
- Data analysis underlines teaching in person method as one of the most suitable methods as well blended teaching/learning and synchronous distance learning as a method has the potential.
- 10. For the largest part of surveyed teachers, it is important to get feedback from students what helps them to get some reflection on how are they teaching and using teaching methods in the lessons as well to make some adjustments to make better progress in their teaching.
- 11. 66% of respondents indicated that personal contact between teachers and students during the learning/teaching process is very important and 25% of respondents indicated that it is extremely important;







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- 12. Most teachers (87%) think that it is possible to combine teaching/learning in person with distance teaching/learning;
- 13. On the whole teachers know about blending the individual ingredients of blended teaching to make the blended lesson consistent and effective and even though they would like to receive training on how to make lessons based on blended teaching;
- 14. The majority of surveyed teachers would like to teach students more in person and less online. 67% of surveyed teachers would like to deliver lectures more than half time of lessons in real classes with students and rest time online;
- 15. 59% of surveyed teachers think that possibility for students to attend a course at his/her own time and convenience could improve a students' performance and efficiency;
- 16. 75 % of respondents think that distance education does not reduce the role of the teacher in the educational process;
- 17. The educational process is affected mostly by individual factors (51% of respondents) and it is affected moderately by VET school factors (33% of respondents). The family factors affect the educational process to a small extent (16% of respondents);
- 18. The teachers indicated that individual factors play the most important role in the educational process. *The motivation of students* (14 % of respondents) is crucial in the teaching and learning process what directly affects students' willingness to learn, and consequently their learning outcomes. *Personal effectiveness* (13 % of respondents) shows how much are students ready to be involved in the acquisition of new knowledge and skills, their capacity. *Correctly chosen profession* (11 % of respondents) means student like what he/she learns. When the students acquire a profession that they like they can reach better results. *The time devoted to the acquisition of the profession independently* (6 % of respondents) shows students 'interest in their profession and time devoted to the acquisition of it independently besides formal education at VET school.