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Using interactive whiteboards in teaching English

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Prohlašuji, že jsem závěrečnou práci vypracovala samostatně a použila jen uvedených pramenů a literatury.

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ABSTRACT

Interactive whiteboards are becoming a widely used educational tool at Czech basic and secondary schools in recent years. The learning environment should be improved by this device. It should attract pupils' attention and offer teachers large variety of resources. But the question is whether English teachers really have possibilities to use interactive whiteboards. The conditions for their use are studied in this thesis. The aim is also to provide the reader with overall impression interactive whiteboards give when used in English lesson and illustrate how the full potential of IWBs and their accompanying software can be used.

CONTENTS

INTRODUCTION

As the title reveals, the goal of this diploma thesis is to study the usage of modern technological devices, interactive whiteboards, in teaching English as foreign language. Throughout the thesis the commonly used abbreviation IWB refers to the interactive whiteboard.

In recent years, IWBs are becoming an integral part of foreign language education. The concept of possible IWB deployment, however, is not clearly defined. It is not suggested how to teach with the IWB and in what manner IWBs should be helpful for learners, teachers and their teaching practice.

'Only a good understanding of the use of this educational tool can ensure that teachers and their students gain the most benefit from it.' [1]

Theoretical part is organized with respect to the quotation above. Generally, this section explores actual situation of most teachers beginning with the IWB as it is always essential to form solid bases before any deeper subject specific examination. As for the structure, basic facts about IWBs and conditions for their use are included at the beginning. Subsequently, some advices on training and principles of IWB use are given. It is aimed at both background materials which can be used in lessons and features of IWB software. Lastly, the theoretical part summarizes all aspects of IWBs by considering their advantages as well as disadvantages.

Practical part consists of three analyses, of teachers' questionnaire, pupils' questionnaire and of shared home-made materials created in IWB software.

The first part of the teachers' questionnaire focuses on situation at Czech schools and in English classrooms and, more specifically, whether they are equipped with IWBs or not. Then the impacts on the usage of this technology in English lessons are studied. It is assumed that mainly these conditions might play a part in it:

- availability of IWBs for English lessons,

- teaching experience,

- teacher's digital competences,

- teacher training in IWBs.

The last part of this questionnaire examines teachers' experiences with IWBs which are formed during their practice.

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[1] MERCER, N. in THOMAS, M.; SCHMID, E. C. 2010, s. XV.

The second section in the practical part wants to find out if pupils see IWBs as a beneficial tool or not and if teachers are aware of what their pupils like and do not like about IWBs. Consequently, when attitudes on IWBs of both, pupils and teachers, are gathered, it is suitable to concentrate on main reasons why IWBs are important in education.

Finally, the material analyses try to assess the quality of home-made shared presentations from the viewpoint of English lessons' content and structure, the way they conform with widely accepted graphical norms of presentation layout, and IWB software facilities which are used.

Theoretical part

I INTERACTIVE WHITEBOARD CHARACTERISTICS

Firstly, it is good to introduce the interactive whiteboard and to get a general overview what is meant by this term and to understand the way how it works. And as we are basically interested in the usage of the IWB at school to enhance learning, it is necessary to mention its appropriate location within a classroom. Then, we should take into consideration various types of IWBs which can be found on the market, and deal with suitability of a given model when choosing the right interactive whiteboard. Finally, we are going to deal with some pieces of advice on what can facilitate its smooth use.

According to Barber et al.[2] the interactive whiteboard should be referred to as a system rather than a device. The reason for it is that the IWB operates because of three main components which are interconnected. All the parts are essential and irreplaceable. There is needed a personal computer or a laptop, a data projector and a touch sensitive screen.[3] We can control the computer in front of the classroom by touching the screen with either a hand or an electronic pen called stylus.[4] All the things which can be done on computer can be performed on the IWB, too. It is very similar to the usage of a mouse or a touch pad on the computer monitor.[5]

When installing IWB into the classroom, a very important question is its position. During the education process the board must be accessible from both sides so that neither left handed nor right handed pupils are disadvantaged. It does not matter where the IWB is situated, but it is important that pupils have a frontal view of the board[6] and all of them can see it from their seats.[7] Moreover, there should be a possibility to prevent the incoming light from reducing the visibility of a projected picture[8].

Usually, the board is in a fixed position on the wall, but in some situations, it is helpful if the board can be transferable. It depends on an amount of space and other conditions within the classroom. The companies offer many variants of IWBs. Some of them can also change their height, what might be one of the likely drawbacks of IWBs from the teachers' perspective. But transferable IWBs must be connected to short throw projectors which are

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[22] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 1.

[3] MOSS, G. et al, 2007, s. 87.

[4] DAVIS, M. R. 2010.

[5] BETCHER, Ch.; LEE, M. 2009, s. 25.

[6] SOMEKH, B. et al, 2007, s. 93.

[7] BANNISTER, D. et al, 2010a, s. 15.

[8] LEVY, P. 2002.

a relatively new invention.[9] However, a person must think not only about the position of the screen, data projector and pupils, but also about the classroom lights which can also reduce visibility[10].

There is no doubt that a lot of money is needed to buy and maintain IWBs into a school. So, if the school is decided to purchase one or more IWBs, it is very useful to consider the preferences of the staff, because the teachers are the ones who will be the active users of IWBs. Therefore, the most beneficial way is to involve them in the process of choosing an IWB.[11] One of the solutions is that a trial group of teachers is chosen for checking the market of interactive whiteboards and their possible alternatives. At the beginning, teachers should think about whether they would like to control the board by the hand or the stylus, how user-friendly the software is and how durable IWBs should be to withstand the everyday demands of the classroom use.[12]

In the Czech Republic, we distinguish between two dominant companies offering different types of IWBs[13]. These are Promethean's ActivBoards which are based on the principle of electromagnetic stylus and Smart boards by Smart Technologies with resistive technology responding to the pressure of fingers or a 'dummy pen'.[14] Both organizations developed their own software which can be downloaded from their web pages free of charge for a limited amount of time. So, this is a wonderful possibility for teachers to try it beforehand and make judgements about its potential and practicality. Additionally, they experience it themselves and may prepare a list of what they expect from the technology, what was difficult for them and what are advantages and disadvantages of given software. These issues can be consulted with professionals later on.[15]

Once the director has decided which IWBs are to be bought and how many of them are to be installed in his/her school, s/he must choose particular subjects and classrooms where IWBs will be placed. The possibilities are Math, Sciences, Languages and so on. Teachers of

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[9] SKLÍPKOVÁ, H. 2009.

[10] SOMEKH, B. et al, 2007, s. 93.

[11] PEACHEY, N. 2009.

[12] DAVIS, M. R. 2010.

[13] NEUMAJER, O. 2008.

[14] SMART TECHNOLOGIES. 2009, s. 127-130.

[15] PEACHEY, N. 2009.

these subjects will have IWBs available for their lessons and are supposed to learn how to work with them and use their full potential in their subjects (cf. IV.1 Training).[16]

The providing of a regular technical support is also a must. It might cause quite a lot of problems when the school is not prepared. The institution should still think about cleaning filters of data projectors, changing projector bulbs and updating software. Although it is quite expensive, it is worth to do it on a regular basis. Otherwise, it might happen that the IWB stops working properly just in the middle of a lesson. Then, it is usually quite difficult to find the help immediately and teachers must change their plans. One solution is mentioned by Bannister: 'Some schools have their own technician, even if it is for only a few hours per week.'[17]

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[16] NEUMAJER, O. 2008.

[17] BANNISTER, D. 2010b, s. 13.

II THE USE OF INTERACTIVE WHITEBOARDS VERSUS INTERACTIVE TEACHING AND LEARNING

It is very common that people interchange these two terms, the interactive whiteboard and interactive teaching. But does it really mean that teaching with the interactive whiteboard always affects the interactivity in the classroom?[18]

According to Oxford Advanced Learner's Dictionary the word interactive can be described in two different ways. The first description of the adjective interactive is 'involves people working together and having an influence on each other'[19] and the second one 'that allows information to be passed continuously and in both directions between a computer and the person who uses it'[20].

Therefore, the adjective in 'interactive teaching' should be connected with the first explanation and in 'the interactive whiteboard' with the second one. Neumajer[21] points out that the term interactive whiteboard is partially an advertising slogan which describes the way their product works in comparison with a common whiteboard or a projection screen.

The teacher might prepare interactive lesson with the help of the IWB but the attention will be given to the cooperation between the teacher and pupils or between pupils and their mutual influence on each other. The IWB will be only a tool which can facilitate the pupils' learning and the fulfilment of set aims.[22]

To sum it up, the preparation of an interactive lesson with the usage of the IWB proves teacher's great didactic abilities and his/her good technical knowledge. Teaching with the interactive whiteboard should keep pace with up-to-date technology and stick to modern principles in education at the same time. And just these are main reasons why schools put so much effort into purchasing IWBs at their schools.[23]

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[18] BANNISTER, D. 2010b. s.24.

[19] HORNBY, A. S. 2005. s. 809.

[20] HORNBY, A. S. 2005. s. 809.

[21] NEUMAJER, O. 2008.

[22] BANNISTER, D. 2010b. s.24.

[23] NEUMAJER, O. 2008.

III COMPETENCES NEEDED FOR THE RIGHT USE OF THE IWB IN THE CLASSROOM

As well as every profession the teacher is expected to acquire and develop some competences. Today pedagogy emphasizes competences which focus on the pupil's personality and mutual communication beside the special professional one. In Švec[24] teacher's competences are divided into psycho-didactic, diagnostic and interventional, general educational, communicative, reflexive competence, advisory and consultative. The general educational competences are considered to be central in teaching English as a foreign language with the help of the IWB[25]. Basically this group involves developmental competences where a subgroup called digital competences appears[26].

III.1 Digital competences

Nowadays, the technology is rapidly developing and becomes very important part of our society. It has changed approaches mainly to work, learning, teaching, leisure time, etc.[27] It is therefore essential to keep pace with it. Otherwise, teachers might easily become socially isolated. The best way how to prevent such problem is to create a link between the usage of technology and learning as much as possible.[28]

In the Czech Republic, students' digital competences are supported by the subject on ICT which is taught at the primary and secondary levels of basic schools. In addition, the work with technologies should be a part of all subjects so that students could learn it in context.[29,30]

But for fulfilling the task teachers need to be educated in this way, too. They should undergo training with examples of a good practice and have an access to high quality resources. Then, it is supposed that they are able to motivate students to be creative and use critical thinking when working with modern devices not only at school, but also at home.[31]

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[24] ŠVEC, V. 1999. s. 22-25.

[25] MUNAPI, J. 2011.

[26] ŠVEC, V. 1999. s. 22-25.

[27] ALA-MUTKA, K.; PUNIE, Y.; REDECKER, Ch. 2008, s. 3

[28] ALA-MUTKA, K. 2011, s. 7-8.

[29] BALANSKAT, A.; GERTSCH, C. A. 2010, s. 7-12.

[30] MOSS, G. et al, 2007, s. 90.

[31] BRDIČKA, B. 2010.

First it might be beneficial to summarize what the digital competences mean. This complex term consists of three parts: knowledge and understanding, skills and attitudes[32]. All together, these digital competences are predispositions needed for the advanced usage of Interactive Whiteboards[33].

The user of the IWB should have at least some experiences with information and communication technologies and understand them adequately. The must is the knowledge of how to save information and make an efficient organization of data, and how to work with word processors, spreadsheets and other computer applications. It is also essential that s/he understands the way internet communication and number of internet applications work.[34]

The second step is far more practical and deals mainly with skills. The person must prove that he is able to use all the mentioned applications himself logically and systematically. He should be able to choose right applications for meeting his/her objectives and then employ them as an active user.[35]

And as far as we are concerned there are the attitudes, which are of the same importance as the foregoing parts. The person must be willing to work with ICT himself as he knows the benefits of it, for example broadening his horizons. Not only does he work with it regularly on his/her own, but he also cooperates with other people in groups.[7] New gathered information should be weighted according to its importance and veracity. So the person must consider the reliability of sources and his/her ethical duty when using the sources, too[36].

These basic principles must be considered during the education process. When teaching with interactive whiteboard learners can see how the teacher manipulates it and how he or she works with certain software. Later, pupils might be asked to repeat the activity or do another task in a similar way. Therefore, next time they encounter this program themselves, they will be aware what to do with it. And this learning within context helps students to gain their digital literacy.[37]

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[32] ALA-MUTKA, K. 2011, s. 34.

[33] BALANSKAT, A.; GERTSCH, C. A. 2010, s. 3-4

[34] ALA-MUTKA, K. 2011, s. 34.

[35] BALANSKAT, A.; GERTSCH, C. A. 2010, s. 3-4.

[36] ALA-MUTKA, K.; PUNIE, Y.; REDECKER, Ch. 2008. s. 4.

[37] SMITH, H. J. 2005, s. 94.

IV GETTING STARTED

IV.1 Training

For the right use of the interactive whiteboard it is necessary that teachers undergo some training. But they must be intrinsically motivated to be successful in this learning process as a lot of self involvement and time is needed to make use of the IWB's full potential.[38]

When the board is installed the first condition for effective training is that teachers possess at least minimum of ICT skills (cf. III.1 Digital competences). If they do not know how to work with computers the whole training might be less effective or cannot be undergone. Only teachers experienced in this field should be introduced to the basic IWB's functions and its controlling. For beginners with the technology it is suggested to complete a course in ICT firstly.[39]

If the board is bought the sellers should provide basic training which is part of a purchase. It usually consists of three hours of dealing with the technical features of IWBs. It is more than likely that teachers get in touch with the IWB for the first time. They see the way it works and try to operate it themselves. Later on, six hours of methodological training, the development of content and material creation in particular software follow. The correct usage of the board according to didactic principles is emphasized throughout these sessions. The practitioners also meet with the functions of software for interactive whiteboards and create their first presentation there. The most challenging moment is when teachers try it themselves under the supervision of the trainer is very important.[40] During training, practitioners should be also informed about materials which can be used on the IWB and that some suitable resources might be downloaded from the internet free of charge[41] (cf. VI Resources for the IWB in English lesson).

A lot of teachers complain that this kind of training is insufficient. Some schools are willing to invest money in long-term training. However, this is quite a lengthy process and needs to be planned. The best way is to find the person who is adept in modern technology.

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[38] SMITH, H. J. 2005, s. 98.

[39] BANNISTER, D. 2010b. s. 46.

[40] BANNISTER, D. 2010b. s. 47.

[41] MOSS, G. et al, 2007, s. 138.

S/he will be responsible for guiding the training session and checking the latest upgrades of IWB software.[42]

A significant part of an effective long-term training is cooperation amongst colleagues when a group of teachers meets on regular basis. They set targets for their future professional development, which is highly motivating[43]. Not only do they support each other, but it is also possible for them to talk about their achievements, the examples of good practice and activities which did not work well. Thanks to this discussion the beginners get new ideas and the experienced users may come up with solutions to their problems in collaboration with the others[44].

Other schools might not have enough money for the further teacher education and the practitioners who want to use the IWB successfully must work with it step by step themselves. This consumes much of their time because teachers need to practise work with the IWB a lot. They are supposed to accept responsibility for their training. Otherwise the IWB would be a waste of money.[45]

Bannister also points out that 'subject specific training'[46] concerning IWBs should be part of secondary teachers' training. Software which is specially designed to support particular subjects accompanies the IWB and teachers should be aware of it[47]. Teachers are supposed to reach an acceptable level of proficiency in using IWBs having finished the training course[48].

The enthusiasts or people who do not have a chance to get professional training can visit websites of the companies selling IWBs. Free online video courses which demonstrate individual IWB tools can be found there[49]. However, they are mainly for English teachers or people who are good at foreign languages such as English, French or Spanish, as these courses are not available in every language. In the Czech Republic, educators can visit web pages of the two dominant companies, www.smarttechnologies.com or

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[42] BANNISTER, D. 2010b. s. 46-47.

[43] BANNISTER, D. 2010b. s. 49.

[44] MOSS, G. et al, 2007, s. 58.

[45] SMITH, H. J. 2005, s. 131.

[46] BANNISTER, D. 2010b. s. 47.

[47] BANNISTER, D. 2010b. s. 47.

[48] SMITH, H. J. 2005, s. 130.

[49] BANNISTER, D. 2010b. s. 19.

www.promethean.com, where they can find online training. This kind of training is very suitable for the self-study[50].

Finally, one important thing must be mentioned in relation to practitioners. The IWB is not bought to alter their teaching methods and styles. It is a tool which should enhance the quality of their teaching and pupils' learning, but teachers can keep doing things they are accustomed to.[51]

IV.2   First steps with the IWB

This chapter describes people who are at least a little bit experienced with the computers and their use. Computer literacy is prerequisite for the IWB usage. For beginners Bannister suggests a three-stages process which will help them to become more self-confident and proficient in the usage of the IWB step by step.[52]

After the first part of the training teachers know how to operate the interactive whiteboard either by hand or stylus. Their task one is to engage with the IWB in the process of teaching as much as possible and by means they already know from their previous experience.[53] The best way is to access internet web pages or present materials in programs such as Microsoft Powerpoint and Microsoft Word. 'The teacher must become confident about the mastering the new tool'[54], s/he should learn what to do if shades appears on the board, and how to organize children in front of the board[55].

During the second step, the practitioner tries to work with IWB software and its basic functions, which are suitable for his/her subject. The English teacher does not have to work with functions specially designed for subject like maths and physics. S/he is supported in the creation of new materials and personally tests the activities' success in the classroom.[56]

Once the practitioner prepares his/her or her materials and tries them with students, the presentations might be saved and prepared for the next time. However, it depends on the quality of them. After his/her first trial, the educator knows which activities are useful and

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[50] BANNISTER, D. 2010b. s. 48.

[51] SMITH, H. J. 2005, s. 131.

[52] BANNISTER, D. 2010b. s.10.

[53] MOSS, G. et al, 2007, s. 92.

[54] BANNISTER, D. 2010b. s. 10.

[55] BANNISTER, D. 2010b. s.10.

[56] BANNISTER, D. 2010b. s. 11.

also which ones should be changed. Of course, it is a must to modify created materials to suit a particular class and learners' individual needs.[57]

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[57] BANNISTER, D. 2010b. s. 11.

V METHODOLOGY PRINCIPLES CONCERNING TEACHING ENGLISH WITH THE IWB

Once the teacher is decided to plan a lesson with the IWB and its accompanying software, s/he must take into account some points. The content and organization go absolutely first. Secondly, the principles of preparing presentation must be followed so that results of the teacher's work might be useful. The final and the most important part is a teaching process. In the classroom, some routines are established that must be obeyed in order to be a successful IWB user.

V.1 Planning lessons with the IWB

V.1.1 Content and structure of the presentation

The content of the lesson where the IWB is used is similar to the usual one. And because the teacher is a professional, s/he knows a lot about lesson planning but is aware of possibilities which the IWB offers to him/her.[58]

In short, what should be taught in English lesson are language skills and language as a system. The first group involves listening, speaking, reading and writing skills or so call the 'how' which should be equally practised with the children.[59] The second one, the 'what', concentrates more on grammar, vocabulary and pronunciation.[60] Every English teacher knows these categories. S/he usually bases the lesson content on textbooks which deals with them (cf. VI.1.1. Home-made materials and shared home-made materials).

Secondly, a good lesson is supposed to be logically structured[61]. In English lessons it is suggested to start with a quick warm-up activity and then to continue by presenting a new topic or by the short revision of the important points from the last lesson[62]. The new topic is supposed to be organized from the easiest task to the most difficult one[63].

Taking into consideration the content and the structure the last thing which should be mentioned is the length of the prepared material. The best case is when the presentation is no longer than the lesson itself. In Czech schools lessons of English last forty-five or ninety

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[58] MARTINKOVÁ, A. 2009.

[59] UR, P. 1999, s. 41-73.

[60] UR, P. 1999, s. 16-40.

[61] STÖCKLOVÁ, A. 2009.

[62] BEARE, K. 2009.

[63] STÖCKLOVÁ, A. 2009.

minutes. Therefore the length of the presented material should be adequate. Taking into account the fact that, pupils themselves should not work with the IWB more than twenty minutes.[64]

V.1.2 Presentation layout

Working with IWB software for the first time, the teacher must bear in mind that the view of the audience is different from his/hers, fronting the computer screen. The presentation layout might be inappropriately chosen and unclear to children. The texts showed on the IWB in the classroom have to follow some principles as well as any other public presentation.[65]

Speaking about the texts in presentations or flipcharts, the absolute necessity is an appropriate font. The presenter must keep in mind the back desk distance and adapt the text to make it readable. The absolute minimum font size is twenty points and a sans serif typeface is recommended because a serif one makes the audience read longer.[66]

Sans serif typeface   Serif typeface

Another thing which might worsen pupils' situation is the wrong choice of colours. The teacher must select typeface colour with respect to the presentation background. Similar soft colours are considered as an improper combination. But two contrasting colours are the best solution, a good example can be dark blue for the background and white for the text.[67]

In the presentation, the amount of the text on a screen must be checked. Limits are established and they specify the number of words on a line and in a column. Maximum is seven lines and seven words in a line.[68] Although it is not always possible to follow them, the presenter should try to use as few words on a slide as possible. This makes the presentation clearer and pupils are able to concentrate harder.[69] (For examples of good and bad practice see appendix 1)

As for pictures, similar principles should be applied. They must be of appropriate size so that children sitting at back desks could see them. The visibility is supported by the use of

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[64] STÖCKLOVÁ, A. 2009.

[65] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 33.

[66] MACHÁČ, J. 2010.

[67] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 33.

[68] STÖCKLOVÁ, A. 2009.

[69] BANNISTER, D. et al, 2010a, s. 21.

contrasting colours of pictures and background. And to ensure the clearness not many pictures should be used on a slide or at least they should be clearly organized.[70]

Teachers are discouraged from using interactive animation on a slide where some information is shown as information transmission is much more important than animation. Animation, especially the lively one, can easily disturb the reader and might be unpleasant to the eye. However, it might be saved for the end of the lesson to thank pupils for their attention and to reward them.[71]

V.2   Teaching with the IWB

V.2.1   Before teaching

Before the start of the lesson with the IWB assistance, the teacher must check the conditions in the classroom for the education process. With respect to the classroom management there must be enough room in front of the board for gathering pupils.[72] Children should have possibilities to move quickly from their desks to the board. The recommended type of the classroom organization is a U-shape where the pupil can approach the board easily and sit in a comfortable position and see the board. For this apparent reason, an O-shape is not advises.[73]

Teachers are responsible for checking their presentation readability and appropriateness for conditions within a particular classroom. Testing various positions helps to understand what should be changed. If anything is wrong with the presentation, the IWB offers its facilities through which most of the problems can be solved quickly and easily. Of course, sometimes a bigger intervention might be needed which must be done at home. But at least it will be prepared for future use.[74]

V.2.2   While teaching

Children working with the IWB for the first time are curious and interested in this modern technology. However, the negative feelings might be aroused towards it. This usually happens when children come to the board, cannot manipulate it and become the objects of derision in the class.

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[70] MACHÁČ, J. 2010.

[71] MACHÁČ, J. 2010.

[72] MARTINKOVÁ, A. 2009.

[73] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 33.

[74] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 32.

The main condition for the successful usage of the interactive board is that the pupils are digitally literate (cf. III.1. Digital competences). It is the same as with teachers. But nowadays it is common that children understand modern devices much more than most adults because they are using it on a daily basis. And the second point but also very important one is that children should be taught how to operate the board to be able to use it efficiently. There are two ways how they can learn it. Firstly, through everyday interaction with the board they learn to use it by trial and error or secondly by taking a specialized lesson on controlling the IWB.[75]

First of all it must be explained to pupils from where to operate the board. When looking at the board the right handed pupils should stand on the right side of the board and the left handed ones of the left side. Therefore, two rows are created on both sides of the IWB. The groups of pupils in front of the board should not block the view of the rest of the class. On the other hand, they must see the board themselves to be able to fulfil the task.[76]

To avoid shades on the board from long-throw data projectors, the right handed person operates the board from the right side and tries to avoid being in front of the board as much as possible. Users step in front of the IWB only when they need to reach the opposite side of the board or write down some text.[77]

The disruptions during teaching process are generally unwelcomed. Although the atmosphere might become lively and funny, it does not arise from the subject matter but from the pupils' unfamiliarity with the device which causes general amusement. There are generally two ways how to avoid this interference. Firstly, children can undergo introductory session on usage of the IWB where some game-like activities can be done before the actual presentation which will help them to gain self-confidence. Or secondly, they can be taught how to work with it step by step when they come across particular feature.[78]

If there are many students in the class, not everybody can interact with the board at a time[79]. Teacher is responsible for managing his/her classes so that everybody has

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[75] MARTINKOVÁ, A. 2009.

[76] MARTINKOVÁ, A. 2009.

[77] MARTINKOVÁ, A. 2009.

[78] MARTINKOVÁ, A. 2009.

[79] MARTINKOVÁ, A. 2009.

opportunity to express himself/herself. Generally no limitations of groupings exist in the classroom everything is up to the educator.[80]

Employing whole class teaching is very common at schools. Though it has also some disadvantages this kind of classroom management is very popular with many teachers.[81] The IWB can make such lessons more efficient. A nice example is sharing pupils work. Every learner can see at a time what is happening on the board and can contribute with his/her opinion.[82]

As the best way it is suggested to divide the class into two or three smaller groups so that each pupil can be involved actively in interaction with the board. Then one part of the class is working on the IWB and the others are given different task to complete where the interactive whiteboard is not needed. When pupils working on the board finish their exercise, the groups swap over. So, all the groups might be working efficiently.[83]

Last two possibilities are involving pair work and individual work in the classroom. The IWB can be used for checking the results of pair or individual work[84] or pupils can present their work in front of the class.[85]

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[80] HARMER, J. 2009, s. 161.

[81] HARMER, J. 2009, s. 161.

[82] MOSS, G. et al, 2007, s. 31.

[83] MARTINKOVÁ, A. 2009.

[84] MOSS, G. et al, 2007, s. 38.

[85] MOSS, G. et al, 2007, s. 32.

VI RESOURCES FOR THE IWB IN ENGLISH LESSONS

Firstly, it is suitable to look at the materials from the perspective of the material's author. The second division concerns resources which can be found on the internet. In this situation it is not important who the author is but how materials can be accessed as they can be downloaded or used online. These two main principles should be certainly considered by the teacher as both have their advantages and disadvantages.[86]

VI.1 Material characteristic according to the author

Basically, English teachers have three main possibilities how to get their resources. First, they can prepare their own educational materials. Second, they can use files which are shared by the members of the school or on the internet. And finally, there are professionally published materials- the commercial ones. Every teacher has right to choose from these sources and combine them. However, all of them have their pluses and minuses.[87]

VI.1.1 Home-made materials and shared home-made materials

If teachers are trained to work with IWB software, it is usually within their technical abilities to involve themselves into the process of producing their own materials. They have some options which software to choose.[88] Applications SMARTnotebook and ActivStudio are connected with already mentioned interactive whiteboards, Smart board and ActivBoard.[89]

When teachers are working on their own resources, they usually base it on the content of the textbooks used in the classroom. Activities on the IWB may support topics and grammar in the course book, practice or revise the subject matter or have a motivating function.[90] Of course, the product of teacher's preparation is influenced also by his/her own experience, knowledge, fantasy and creativity into such process and therefore the result of his/her endeavour is purely original work.[91]

Every teacher must bear in mind that during his/her presentation s/he should not break the copyright laws.'Stealing' pictures from some internet web pages without permissions of the authors it is illegal. Nevertheless, teachers can use freeware pictures or visual material

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[86] MOSS, G. et al, 2007, s. 91.

[87] MOSS, G. et al, 2007, s.135.

[88] BANNISTER, D. 2010, s. 28.

[89] THOMAS, M.; SCHMID, E. C. 2010, s. 55.

[90] UR, P. 1999, s.176-180.

[91] KLEMENT, M. et al, 2007, s. 227.

supplied in the gallery. Sometimes the students' photos might be useful during individual activities in the classroom but the teacher must be aware that pictures of his/her pupils cannot be distributed without the parent consent. Therefore it is always better to inform parents that it might happen only for the class needs.[92]

Usage of own home-made materials support not only pupils' individual needs but also teaching methods of the educator. Therefore, the lesson organization and exercise difficulty is accustomed to particular classes as their teachers have many experiences with their pupils and know how to adapt the schoolwork. In addition, teachers feel better because their files 'meet their precise requirements'[93].

However, some concerns appear there. Files, that are teachers' work, might not be professional enough as the inexperienced teacher might underuse IWB potential. For example, the exercises may not be based on the activity of pupils and on their interaction with the board.[94]

Shared home-made materials might be electronic resources which are saved either on school network or on the internet. In the first example, teachers from one school make their presentations and share them with their colleagues. In the case of internet teachers from different regions cooperate and upload their works or diverse selection of materials is available online.[95]

Some problems might arouse as the teacher should be aware of reliability of the source. Highly credible web pages which specialize on sharing teacher's files are http://www.activboard.cz for the ActivInspire software or www.veskole.cz and www.exchange.smarttech.com for Smart Notebook. Very important thing is to go through the chosen file thoroughly before the start of the lesson and evaluate it. Only then it should be used in the classroom.[96]

VI.1.1 Professionally-made materials

In the English lesson, the main source of information is usually a book. According to it teachers create their syllabuses and organize their lessons. Nowadays, the English books are

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[92] MARTÍN, D. 2009. s. 12.

[93] THOMAS, M.; SCHMID, E. C. 2010, s. 55.

[94] THOMAS, M.; SCHMID, E. C. 2010, s. 56.

[95] MOSS, G, et al, 2007, s. 91.

[96] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 51.

quite different from the past. There used to be only printed teacher's books, student's books and workbooks but a significant change has happened. [97]

Almost all newly published English books have their paper and digital format together with many supplementary materials. Traditional textbooks and workbooks in paper are still on offer but accompanied by various digital materials such as CDs, DVDs, CD-ROMs or teacher support web pages.[98]

The usage of these additional resources makes it easier for teachers to prepare their lessons. It is primarily beneficial for inexperienced teachers embarking on new technology. They learn how to manipulate the board themselves easily throughout their lessons and they can get some new ideas.[99]

Again, some limitations exist there. Firstly, buying such materials might mean a substantial sum of money which must be invested by the school. And secondly, the publishers and authors of commercial materials must be experts on IWBs. They should know their functions and everything about their usage in the classroom. Nonetheless, it might be quite a long time since they have left their teacher positions. Apart from that they might have no experiences with IWBs at all. As it is expressed by Thomas et al. the editors must ,fully understand the ways in which the IWB is changing classroom pedagogy, and thereby to begin to put together publishing strategies that truly meet market needs'.[100]

VI.2　Downloadable and online materials

Martín created an apt list of internet pages and resources which might be valuable for the foreign language teacher's work. According to him the teacher can use 'online dictionaries, chat rooms, karaoke sites, online magazines and newspapers, news on video, email access, ELS sites, Java applications, blogs, own personal site, school or class webpage, encyclopedias, course management system, songs, lyrics, video sharing sites, film previews, wikis' in his/her work.[101]

Downloadable materials can be printed, saved on a computer or sent by an email. Once the user has done this s/he does not need to be connected to the internet any more. Therefore, the problems of internet connection do not have to bother the user. On the other hand, for

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[97] MARTÍN, D. 2009. s. 9.

[98] MARTÍN, D. 2009. s. 9.

[99] MARTÍN, D. 2009. s. 12.

[100] THOMAS, M.; SCHMID, E. C. 2010, s. 57, 58.

[101] MARTÍN, D. 2009. s. 10.

downloading various programs are needed, for example Adobe Reader or various programs which specialize in video and sound recording. The best solution is to install web browser, such as Maxhton, which specialize in downloading and is able to covert you the video or sound recording in required format. Otherwise, if particular software is not installed on both the teacher's computer and class computer it might cause some difficulties.[102]

One thing the person needs for the usage of materials on the internet is just computer and internet connection. Various exercises, tests, games, listening and other activities liven up the lesson. The easiest way is to prepare the presentation with a link in one of IWB software. This particularly helps to avoid forgetting the exact materials' page and name.[103]

The biggest benefit of shared materials is that educators do not have to prepare everything themselves, for example the presentation of grammar. Not only do they draw inspiration from the works of their colleges, but also approach these materials critically. IWB software enables them to alter it according to their wishes.[104]

VI.3   Summary

It does not matter where the teacher gets his/her resources for the work on the IWB, if they are accessible only online or if they might be downloaded. Everything depends on the teacher which way of work s/he prefers. The must is also awareness of possible drawbacks of each choice.

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[102] SHARMA, P.; BARRETT, B. 2007. s. 35-36.

[103] SHARMA, P.; BARRETT, B. 2007. s. 35-36.

[104] MARTÍN, D. 2009. s. 12.

VII   FACILITIES OF IWB SOFTWARE

To use the full potential of the IWB in the lesson the teacher must be aware of all functions it can perform which might be useful for him/her in fulfilling the lesson aims. For different activities different IWB facilities are suitable. And naturally they should be varied not to cause boredom among children.[105]

VII.1   Common features of IWB software

Generally, there are some features which are common to all types of interactive whiteboards but individual toolbar buttons can usually be found in different places. Therefore, this chapter names the most practical facilities of IWB software with their possible usage.[106]

As well as with the chalkboard the teacher can write on the IWB. However, this is almost all what an ordinary board can do in comparison with modern technology. There are two main possibilities how to do it on the IWB. The teacher can activate the pen tool either by using the stylus or by clicking on the pen icon. The written text on the IWB can be enlarged, lessened, turned or flipped. Through changing the text size it can be made more readable. And if some words are turned or flipped, a guessing exercise is easily created.[107]

Without a text tool it would be difficult for the teacher to prepare his/her own presentation. This tool is especially valuable when working with software on the computer. The user clicks anywhere on the screen and can start typing. On the other hand, when a person is supposed to type on the keyboard displayed on the IWB, it is not very comfortable.[108]

When the picture or the text needs to be annotated, the teacher can use the highlighting tool or pen tool. By means of these the important parts of the text or videos can draw attention to the particular concept which are expressed and can be commented on.[109]

Line tool and shape tool are especially suitable for teacher's material preparation. A large supply of geometrical forms and various types of lines are on offer. For example, the teacher can make use of various shapes for buttons or matching exercise and lines for annotating, pointing and underlining.[110]

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[105] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 36-37.

[106] BANNISTER, D. et al, 2010a, s. 27.

[107] BANNISTER, D. et al, 2010a, s. 27.

[108] SHARMA, P.; BARRETT, B. 2007. s. 83.

[109] SHARMA, P.; BARRETT, B. 2007. s. 85.

[110] MAŠLÁŇOVÁ, A. 2010, s. 35.

Also, pictures can be inserted into IWB software. This function is very similar to one in Microsoft Word or Powerpoint both of which can be used for presenting, too. Pictures make the lesson more visually attractive, can be illustrating and support the memory of visual learners a lot.[111]

When anything is written or some pictures are imported, the user can playfully try to clone the objects. They can be just duplicated or an infinite number of them can be made. It depends on a type of activity they will be used for. Cloning can be also a valuable help during material preparation as the teacher does not have to create his pages again and again, it is enough to duplicate them.[112]

What might be particularly useful is 'handwriting recognition' which converts the text written by hand into a computer typeface. So, the teacher can change the handwriting into readable text by two quick movements.[113] However, few problems appear there. Firstly, the hand written text must be clear so that the computer does not have problems with its recognition. And secondly, the shorter the written sentence is the better. Long sentences are usually automatically considered to be one item. If one word is wrongly recognized, its correction might cause a lot of troubles.[114]

A very important facility is called 'drag and drop'. Bannister even calls it 'the simplest action', which can be performed as the user easily changes the position of items. This especially assist the teacher when writing something, drawing mind maps having no space left or when preparing some matching exercise.[115]

Essential assistant when preparing a presentation is a tool called grouping. It allows the user to join together two or more objects, e.g. pictures, shapes and text, on a screen. Its practicality can be proved during a matching exercise where, for example, words are sorted into groups. The typed text might be grouped with some coloured shape as a background, then the mode for writing will not open after touching the object. However, if the pupil tries to drag just the word which is not grouped with the shape, the writing mode might open and puzzle the learner.[116]

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[111] MAŠLÁŇOVÁ, A. 2010, s. 43.

[112] BANNISTER, D. et al, 2010a, s. 29.

[113] BANNISTER, D. et al, 2010a, s. 29.

[114] SHARMA, P.; BARRETT, B. 2007. s. 83.

[115] BANNISTER, D. et al, 2010a, s. 27.

[116] BANNISTER, D. et al, 2010a, s. 31.

The next tool is called layers. With it the user is able to change the order of items on the screen and place them to the front or to the back. The activities which use this tool might be hiding an answer behind some shape or removing tiles and finding out what the picture underneath is about.[117]

When preparing a matching exercise, a lot of items are scattered on the page. One must be sure that things which are not supposed to be movable, do not move. Locking can prevent the confusion from accidental moving with the background, which might even cause damage to the prepared exercise. The locked objects cannot be ungrouped, moved or the order of layers cannot be changed.[118]

An enormous help is the possibility to place hyperlinks into the file. If the user taps one, it quickly redirects him/her to the relevant web page. This one click is much easier than opening the internet browser, typing the name of the page and searching its menus.[119]

Screen shades hide the answers, pictures until the teacher wants to reveal them. This easy tool might also direct the attention to some point by covering the others. It is used most often when the teaching matter should be gradually introduced.[120]

In the classroom, the bigger text on a screen is the better. The teacher might enlarge his/her pages by using the full screen mode. Its icon is commonly situated in the main toolbar. The main advantage is that though it is displayed on the whole screen, the main menu with tool is still present.[121]

Bannister introduces page record as the tool which 'can be used to record all activity that takes place on the interactive whiteboard during a session'.[122] The teacher might use it at home and save it as a video clip which might show pupils what they are supposed to do in particular tasks. Or s/he can record the pupils' work in the classroom. The combination of sound and page record is very effective when, for example, the video clip is enriched by the teacher's or pupil's description of what is happening.[123]

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[117] BANNISTER, D. et al, 2010a, s. 31.

[118] MAŠLÁŇOVÁ, A. 2010, s. 37.

[119] SHARMA, P.; BARRETT, B. 2007. s. 83, 84.

[120] BANNISTER, D. et al, 2010a, s. 28.

[121] MAŠLÁŇOVÁ, A. 2010, s. 37

[122] BANNISTER, D. et al, 2010a, s. 30.

[123] MARTINKOVÁ, A. 2009.

An enormous advantage is the tool called screen capture/clipping or camera. The user is allowed to take a picture of a screen or part of a screen not only within the IWB software but also outside of it.[124] This greatly facilitates teacher's preparation for the lesson[125].

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[124] BANNISTER, D. et al, 2010a, s. 32.

[125] SHARMA, P.; BARRETT, B. 2007. s. 83.

VIII ADVANTAGES AND DISADVANTAGES OF THE IWB AT SCHOOL

People differ with respect to opinions about integrating the IWB into lessons. Debates are concerning its contribution to the education process as the teachers themselves are experimenting with it. Of course, at the beginning of teaching with new technologies both positives and negatives of the IWB usage must be considered.

VIII.1 Advantages

VIII.1.1 General advantages

Firstly, there are some general facts about interactive whiteboards which are viewed as advantages in education. One of these general benefits is the fact that the IWB can be embedded into all subjects. It supports therefore students' knowledge of modern information and communication technologies and helps them to improve their digital competences (cf. III. 1 Digital competences).[126]

It is very often the teacher who has influence upon the benefits of modern technology in the classroom. If s/he is motivated, trained and experienced, there is no doubt about an enormous advantage it has. When used rightly, the IWB supports pupils' activity as they are interacting with the board.[127]

Interactive whiteboards are great for all types of classroom management. Not only individual work, pair work and group work but also whole class teaching.[128] (cf. V.2.2 While teaching)

VIII.1.2 Advantages for teachers

When planning the lesson the teacher might choose from a large amount of resources which can be presented and used on the IWB. (cf. VI Resources for the IWB in English lessons) They are easy to use and make the lesson more attractive and stimulating not only for students but also for teachers.[129]

The IWB facilities grab the learners' attention. There are so many functions which are new for pupils. If they can be performed well in suitable situations, lessons are suddenly

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[126] LEVY, P. 2002.

[127] MOSS, G. et al, 2007, s. 91.

[128] MARTÍN, D. 2009. s. 10.

[129] THOMAS, M.; SCHMID, E. C. 2010, s. 26.

more lively and interesting. Not only does it catch the attention, but it can also hold it and the teacher's effort can be decreased for a moment.[130]

Of Course, IWBs have a positive effect on the teachers' work, too. Installation of the IWB into the classroom and the usage of accompanying software might help. Both Moss et al[131] and Barber et al[132] mention 'the facility to save and re-use materials'[133] as rewarding from the point of view of time and effort spent on planning and preparing a lesson. It is a kind of investment which will return in the future.

The pupils' work in IWB software might be saved at the end of a lesson and later on opened again when it is needed to remind them of what has been done in a previous lesson. This facility of IWB software helps the teacher to make the lessons interconnected and 'extend learning over the sequence of the lessons'[134].

In comparison with the chalkboard the IWB offers an unlimited display space. The teacher can move with the written text or enlarge the page on the IWB. This is especially beneficial when drawing some mind maps because they might expand unexpectedly.[135]

Another issue is the fact that educators may cooperate on preparing lessons. This might be done locally in one school, for example, through intranet or more widely by sharing materials through web pages with all the teachers of the same subject. (cf. IV.1 Training) This possibility substantially 'reduces teacher's workload'[136].

The IWB gives opportunities to work with children efficiently[137] and increases the pace of the lesson.[138] The teacher has pre-prepared materials and therefore s/he does not have to write down notes and draw pictures on the board during the lesson. It is easier to click on the link to the next slide and move on and the lessons naturally become more dynamic.[139]

Thanks to the IWB the teacher has the class under the control and has more time for monitoring pupils. S/he does not have to turn his/her back to the class while writing on the

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[130] MARTINKOVÁ, A. 2009.

[131] MOSS, G. et al, 2007, s. 91.

[132] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 49.

[133] MOSS, G. et al, 2007, s. 91.

[134] MOSS, G. et al, 2007, s. 91.

[135] MARTINKOVÁ, A. 2009

[136] MOSS, G. et al, 2007, s. 91.

[137] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 49.

[138] MOSS, G, et al, 2007, s. 91.

[139] LEVY, P. 2002.

board. And so, the class is still under supervision and must be following the tasks. As students are copying some piece of information from the board or completing some exercise individually, s/he can go round the class, monitor them and give a help where needed.[140]

The teacher cannot bring the latest information into the lesson unless there is an IWB. Public schools cannot afford to buy new class books every year, and therefore their students do not meet with up-to-date interesting information about the latest music performers, sports events, movies or other public issues.[141] And this might be possible through the use of the IWB. The internet can be accessed easily and used immediately in the classroom.[142]

Sometimes there is no need to find and bring various teaching materials such as flash cards with pictures, board games or CD players to the classroom. In addition the teacher does not have to store such things in his/her office. Everything can be found immediately on the internet.[143]

The IWB is a new tool in hands of a teacher. S/he can also become more interested in his/her teaching, more motivated and possibly it might save the teacher from a burnout which poses a threat on all helping professions. The new technology is a challenge for the teacher who might be tired and exhausted by repeating his/her methods again and again.[144]

VIII.1.3   Advantages for learners

Apart from this, IWBs support different types of learning. Each person learns differently. Some of us respond better to pictures and all kinds of visual stimuli (visual learners), some prefer opportunities to touch concrete things and move them from place to place (kinaesthetic), and others remember the information better if they hear it (aural learners)[145]. This technical device can assist educators to enhance different kinds of learners to achieve better results in English[146].

Also pupils' attitudes towards learning can improve thanks to the IWB. Children are usually more interested in the subject matter and are more motivated because they enjoy the

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[140] LEVY, P. 2002.

[141] MARTÍN, D. 2009. s. 10.

[142] MOSS, G, et al, 2007, s. 91.

[143] MARTÍN, D. 2009. s. 10-11

[144] HARMER, J. 2011.

[145] KLEMENT, M. et. al, 2007. s. 226.

[146] BARBER, D.; COOPER, L.; MEESON, G. 2007, s. 42.

interactive activities which are designed to attract their attention and to practice English.[147] Therefore, their intrinsic motivation is enhanced and the teacher can concentrate more on the aims of the activity and not on managing the class[148]. From Moss et al. Research Report[149] we can learn that pupils perceive IWBs in their classrooms as an endeavour to improve their learning environment. They see interactive whiteboards as 'modern and cool'[150].

The IWB does not have to be the only modern technology in the classroom. One of the possibilities is to buy also a personal computer or a laptop for each student there. And If IWB software is installed on every computer pupils might be given a task to prepare exercises for his/her classmates and to perform it at the IWB.[151] Brdička[152] also points out that using the ICT in the lesson leads pupils to the responsibility for their own learning and that all of them are working at a time in their own pace.

VIII.2 Disadvantages

Nothing is just black or white, that is why we have to mention the disadvantages of IWBs as well. The problems described below are connected with their installation, the wrong type of the interactive whiteboard, the reliability of the technology, the misuse of IWBs by teachers and health problems accessibility.

VIII.2.1 General disadvantages

In the first chapter, the importance of putting the board into the correct position within the classroom is emphasised. If all the principles mentioned there are followed, probably only one difficulty can appear. It is the height of the board as with most types of the board there is no possibility of adjusting it.[153] The adults and children do not have the same heights. Sometimes shorter people cannot reach the top position of the board, or conversely, the board is placed so low that it is uncomfortable to write onto it.[154]

Nowadays, this can be solved by buying a movable board with short throw projectors and two birds will be killed with one stone. What I mean is that IWBs with the mentioned

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[147] LEVY, P. 2002.

[148] THOMAS, M.; SCHMID, E. C. 2010, s. 77.

[149] MOSS, G, et al, 2007, s. 53.

[150] MOSS, G, et al, 2007, s. 93.

[151] BRDIČKA, B. 2010.

[152] BRDIČKA, B. 2010.

[153] NEUMAJER, O. 2008.

[154] MOSS, G, et al, 2007, s. 91.

system can change their heights[155], and in addition teachers will save themselves a trouble of shading the board. However, if the school have already bought one, a possible solution is to place a raised level surface in front of the board.[156]

Many sources speak clearly about how teachers misuse the interactive whiteboards.[157] Or in other words, how they do not use its full 'interactive potential'[158]. As it is suggested in the chapter Getting started it is good that teachers start to use the IWB in the ways they already know. For example, they can use it as a projection screen or a whiteboard and involve only basic function of the software.[159] However, this should help them only with their beginnings and later on they are supposed to study and experiment with it, otherwise, the money invested into the interactive board would be wrongly spent.[160]

There are also some health issues which might be attributed to interactive whiteboards. Neumajer[161] states that the intense light coming from the projector might irritate the eyes. And consequently it might be the cause of eye strain and headaches.

VIII.2.2   Disadvantages for teachers

It is not a rare case that older teachers but sometimes even younger ones might be absolute beginners with modern technologies. Not all of them know how to operate the computer. So, firstly they must learn the basics about hardware and software of the computer and how to make it work. After that, they are slowly starting to work with the interactive whiteboard. And this is the reason why the people who are not so proficient in the use of the IWB complain about an amount of time spent on training and preparation for each lesson.[162]

There is a lack of 'hand-on' practice in most training sessions and that is why teachers who are less computer literate might feel inhibited in using the IWB (cf. IV.1. Training). Not all the trainers have condition to let all their practitioners interact with it individually.

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[155] BANNISTER, D. 2010b, s. 7.

[156] MARTINKOVÁ, A. 2009.

[157] LEVY, P. 2002.

[158] MOSS, G, et al, 2007, s. 93.

[159] NEUMAJER, O. 2008.

[160] MOSS, G. et al, 2007, s. 91.

[161] NEUMAJER, O. 2008.

[162] LEVY, P. 2002.

Although the suggested number of practitioner for a session should be twelve at maximum, this number is not usually followed.[163]

As it was mentioned in the Advantages of the IWB, the usage of pre-prepared material can increase the pace of the lesson. However, the possibility to change the media quickly and move on among the slides may lead to too fast pace. And as a result of this the lower ability learners might not be able to cope with it.[164]

Children become quickly interested but they also bore fast. If some activity or 'new' function is repeated in a short period of time, they complain. Therefore, the teacher must be a real professional and use the particular IWB facilities circumspectly mainly in situations when the attention need to be attracted for some reason.[165]

Sometimes, the drawback might be a low number of IWBs at school. It's not rare case that foreign language teachers do not have their own IWB in the classroom and have to book a room where it is situated. The low accessibility of the IWB for their lessons and the need of moving from a room to a room decrease their motivation to engage with IWBs.[166,167]

Despite the high number of resources which can be used on the IWB (cf. VI Resources for the IWB in English lessons) the professional ones are very expensive. The teacher invests a lot of time and effort into creating his/her own materials which has a logical succession. The professionally created materials should ease their difficult situation, but the schools cannot afford them.[168]

An important issue that the educator must bear in mind is that the technology does not have to always be working.[1] Reasons for this might be a power failure, the need of new bulb in projector, a problem with hardware or software of the computer, a need to change the battery in electronic pen and so on. Hence in this case educators must be prepared to alter their plans. As a solution Levy [169] suggests that in each classroom there should be always present an ordinary whiteboard or a flipchart to write on.

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[163] BANNISTER, D. 2010b, s. 47

[164] MOSS, G. et al, 2007, s. 43.

[165] MARTINKOVÁ, A. 2009.

[166] LEVY, P. 2002.

[167] MARTINKOVÁ, A. 2009.

[168] THOMAS, M.; SCHMID, E. C. 2010, s. 56.

[169] LEVY, P. 2002.

The software might cause some problems. Not only do teachers have to learn how to work with the new upgraded version of the software, but also the usage of newly created presentations on the interactive board with the older versions of the software is limited. This situation can be encountered, for example, when sharing the resources on the internet or when changing your work place.[170]

In addition, when one person of the staff can be nominated to check the web pages of the companies on the regular basis and seek for the possible upgrades and this increases his/her workload. And therefore the time saviour may be brought into question.[171]

VIII.3   Summary

Despite there being disadvantages of this device, it is the educator's motivation, style of teaching and methods that s/he uses what is the most important. Just the interactive whiteboard is worthless if it is not used properly. So, it is rather an educational material which can enhance the teacher's style. Moreover, the technology is still in process of development. Manufacturers are aware of IWBs technical faults and are competing to make them flawless.[172]

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[170] BANNISTER, D. et al, 2010a, s. 25.

[171] PEACHEY, N. 2009.

[172] NEUMAJER, O. 2008.

Practical part

IX   ANALYSIS OF TEACHERS' QUESTIONNAIRE

IX.1   Introduction

The first questionnaire was designed for English teachers from Czech Republic (see appendix 12). In short, it investigated numbers and types of IWBs at schools, teachers' experiences with interactive whiteboards, their digital skills and opinions on IWB usefulness. Its completion should not last more than 15 minutes.

Data for the analysis were collected between March and October 2011. Teachers could complete them in two different ways. One way was to fill in a printed version and another one was to fill it in online.

Approximately sixty printed questionnaires circulated to basic and secondary schools and thereof 49 were returned. A link to the questionnaire was also sent to some collective e-mail addresses which should be accessible to at least 80 teachers of English. Unfortunately, only 11 people replied. Overall, 60 completed questionnaires were gathered.

IX.2   IWBs at schools

The aim of this part is to find out whether Czech directors equip their school with IWBs to adapt and innovate to ensure success in competition, what type of IWB is the most popular and if teachers cooperate on selection of the board.

The data show that majority of teachers (88%) claim that their school owns at least one interactive whiteboard. The rest (22%) have no IWB installed at school (see figure 1).

These results prove that IWBs are becoming widespread also in the Czech Republic.
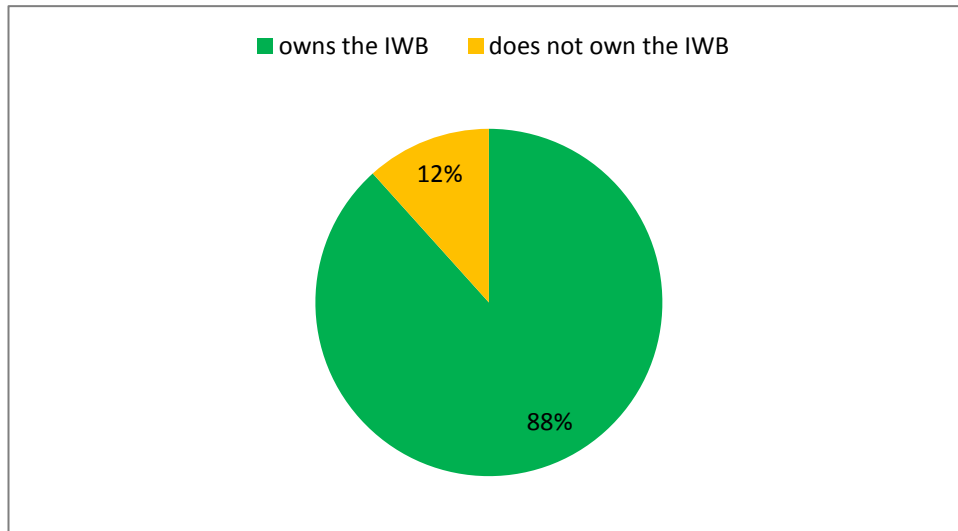
Figure 1. Schools and IWBs.

Concerning the number of IWBs at schools Figure 2 shows that 38% of respondents tick that their schools own five and more interactive whiteboards. Second most often mentioned numbers of IWBs at schools are one IWB (19%) and four IWBs (17%). Three IWBs can be found at schools of 13% of respondents and two IWBs are also installed in 13% of respondents' schools.

Still, almost half of the respondents claim that their school have less than four IWBs. This might mean that the technology does not have to be always accessible to them.
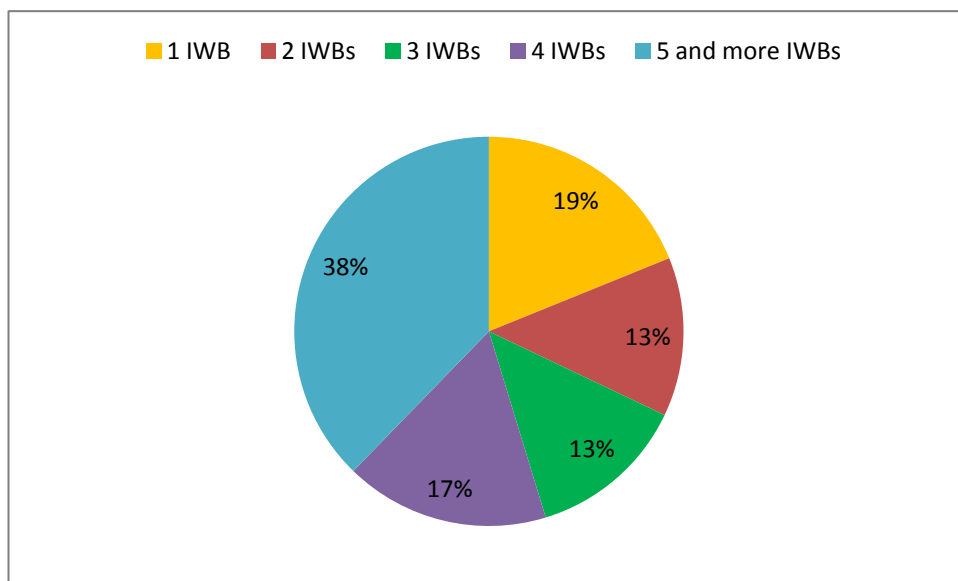
Figure 2. Number of IWBs at a school.

The next question which was given to the surveyed teachers was: ‚What type of IWBs does your school own?' Figure three shows that vast majority of respondents have Promethean Activboard and Smartboard at schools. IWB types, eBeam and Interwrite, can be found in fewer than four of respondents' schools. Some English teachers (10) were also not sure what type of the IWB their school owns.

The results match the expectations that interactive whiteboards, Activboard and Smartboard, are dominant at school in the Czech Republic (cf. I Interactive whiteboard characteristics).
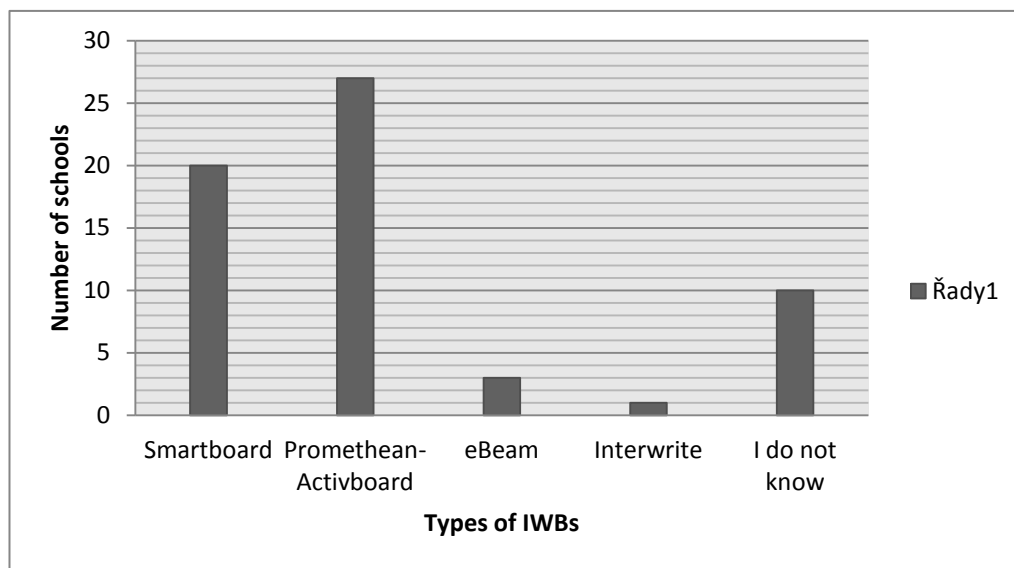
Figure 3. Individual types of IWBs at schools.

3 people surveyed have experience with more types of IWBs, Smartboard and Activboard (see figure 4). Two teachers claimed that software Smart Notebook is much easier than Activstudio. One of them added a comment and likened the organization of the Notebook software to Powerpoint. The third person preferred Promethean Activboard and s/he listed manipulation with the stylus as its benefit.

As it is mentioned in the theoretical part (cf. I Interactive whiteboard characteristics), knowledge of more types of IWBs can guarantee right choice of the IWB which will meet the teachers demands and ensure that the IWB will be frequently used after spending money on it. However, only three teachers have experiences with more IWB types, therefore I assume that Czech teachers do not usually go through this process of IWB choice.
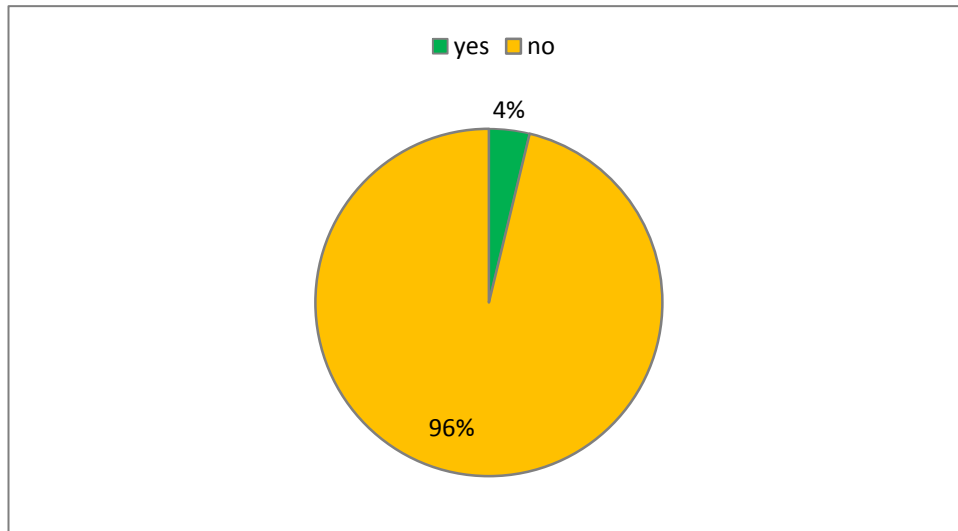
Figure 4. Teachers having experiences with more types of IWBs.

IX.3 IWB usage by English teachers

IX.3.1 Availability of IWBs and frequency of their usage

This section is divided into several parts. The availability of the IWB is the main condition for its usage in lessons and therefore it is mentioned at the beginning (cf. I Interactive whiteboard characteristics). Second, the frequency of IWB usage in the lessons of English is analysed. And finally, as the respondents came from two types of schools, basic schools and secondary schools, their individual situations should be compared.

To the accessibility of IWBs for English lessons most teachers (17) responded that they can teach occasionally with the IWB. Fourteen educators have access to the classroom with the IWB most lessons, ten teachers might teach with the IWB every lesson. The IWB is available rarely to nine respondents and three teachers questioned have no possibility to use the IWB in their lessons. (see figure 5)

The reasons for the limited availability of IWBs for English lessons are mostly low numbers of interactive whiteboards at schools and installation of IWBs into specialized classroom, for example, on Science. These arguments are ensued from the questionnaire.
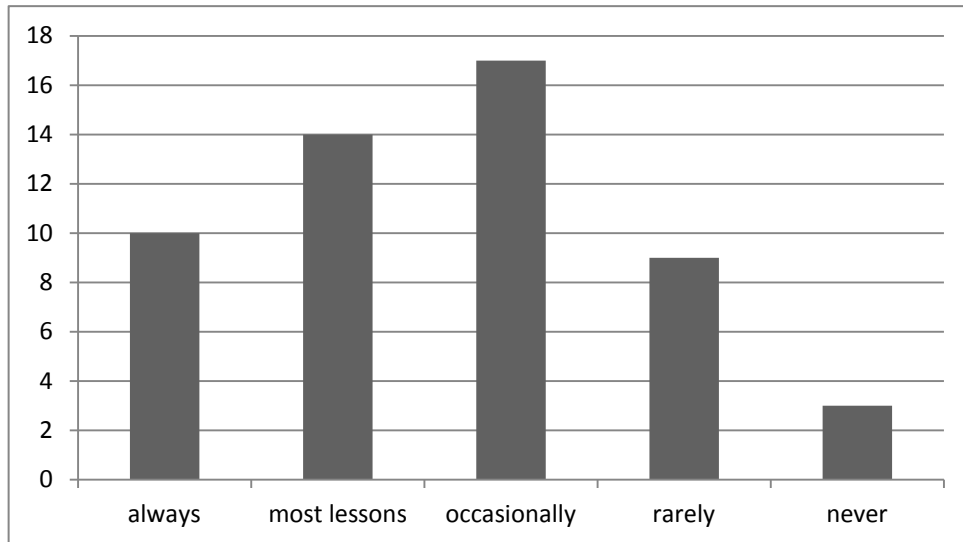
Figure 5. Accessibility of IWBs for English lessons.

Next question asked was about whether the respondents use IWBs in their lessons or not. Majority of English teachers (83%), whose schools own minimally one IWB, answered that they use it and 17% of them replied negatively.
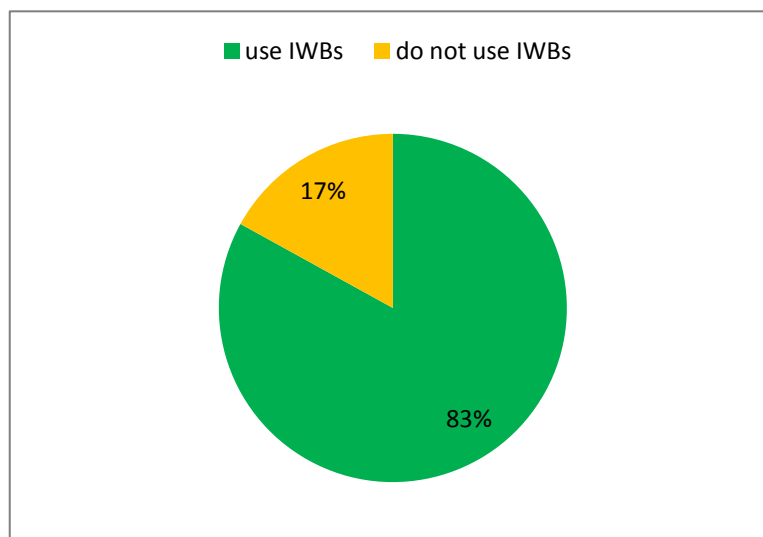
Figure 6. IWBs and their usage in English lessons.

Figure 7 shows how teaching experience can influence IWB usage. 69% of the teachers who are new to the profession and 90% of very experienced teachers use IWBs during their lessons. Teachers with 5-10 year experience use this technology most frequently (93%).

This result is quite surprising as it is usually expected that younger teachers who are new to the profession are generally more digitally literate than the older teachers. Therefore, they are not afraid of experimenting with new technology. According to the research the cause

of this result is probably the inaccessibility of IWBs for their lessons or, in other words, the low number of IWBs at schools.
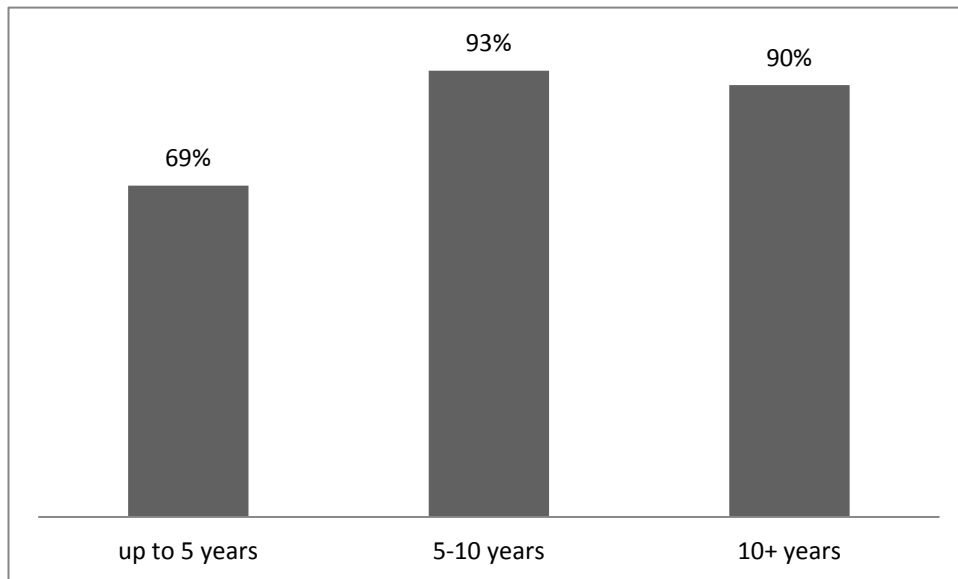
Figure 7. Impact of teaching experience on teachers' IWB usage.

The English teachers who use the interactive whiteboard during their classes were then supposed to answer the question about frequency of its usage. Figure 8 shows that most teachers (18) use the IWB at least once a month, some teachers (13) use the IWB once a week. Eight respondents ticked option every six months and the number of teachers who use the IWB every lesson is five.
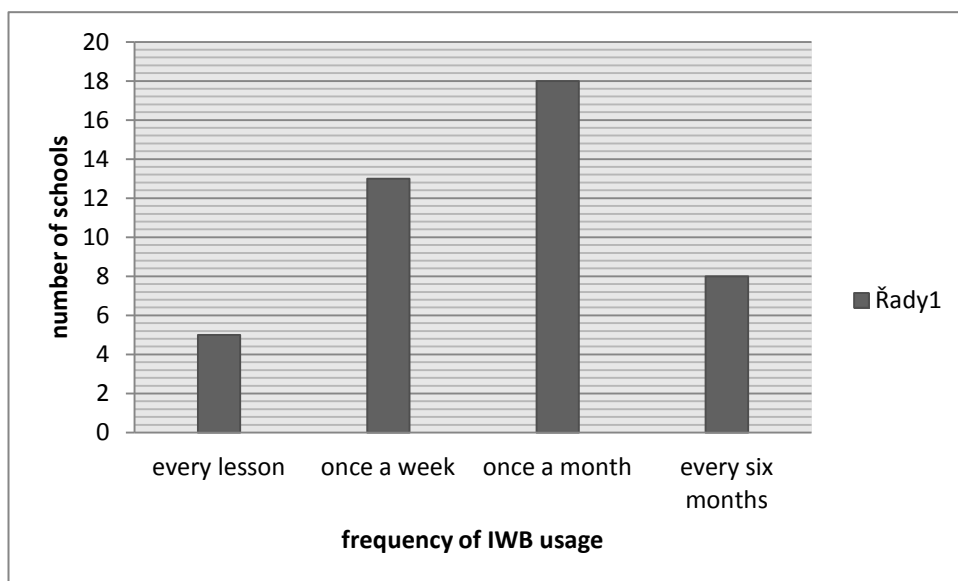
Figure 8. Frequency of IWB usage in lesson of English.

Figure 9 shows that teachers from secondary schools use IWBs less often than those from basic schools. While 25% teachers from basic schools use the IWB every lesson, nobody from secondary school does it. 33% of educators from basic schools teach most English lessons with the IWB in comparison with the low number of teachers (8%) from secondary schools. Teacher from secondary schools teach with the IWB most often occasionally (46%). In the graph there appears 31% of the people from secondary schools who teach with it rarely and 15% who never teach with it.
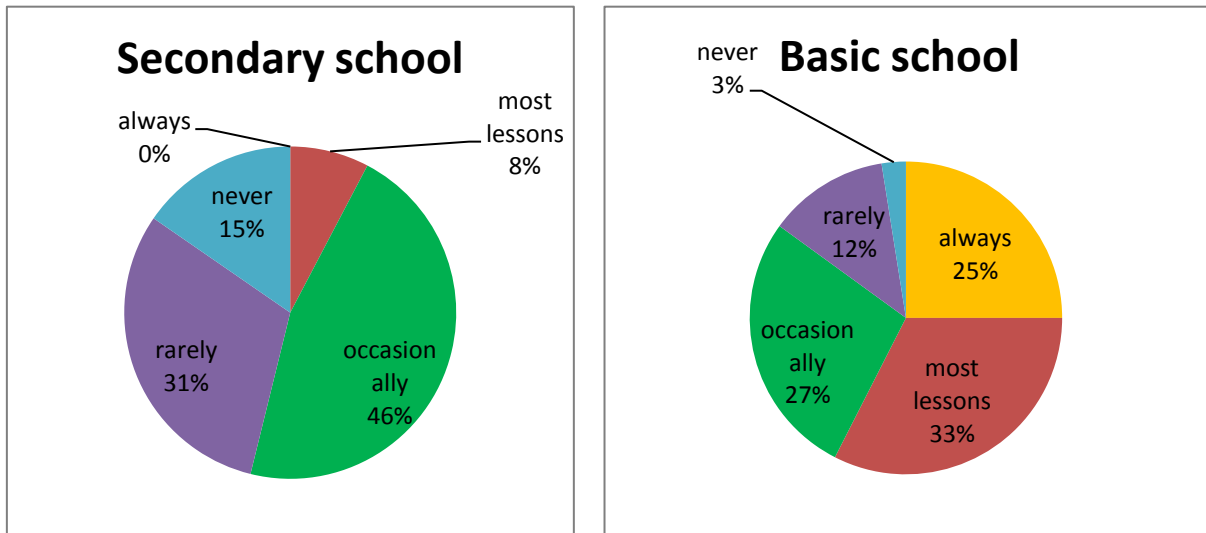
Figure 9. Frequency of IWB usage at particular types of schools.

If Figures 9 and 10 are compared, the impact of availability of IWBs for English lessons on the frequency of its use in lessons can be analysed. At secondary schools IWBs are accessible mostly occasionally or rarely and therefore they cannot be used in all lessons. On the other hand, the IWB is available always or for most lessons to 62 % of respondents from basic schools.
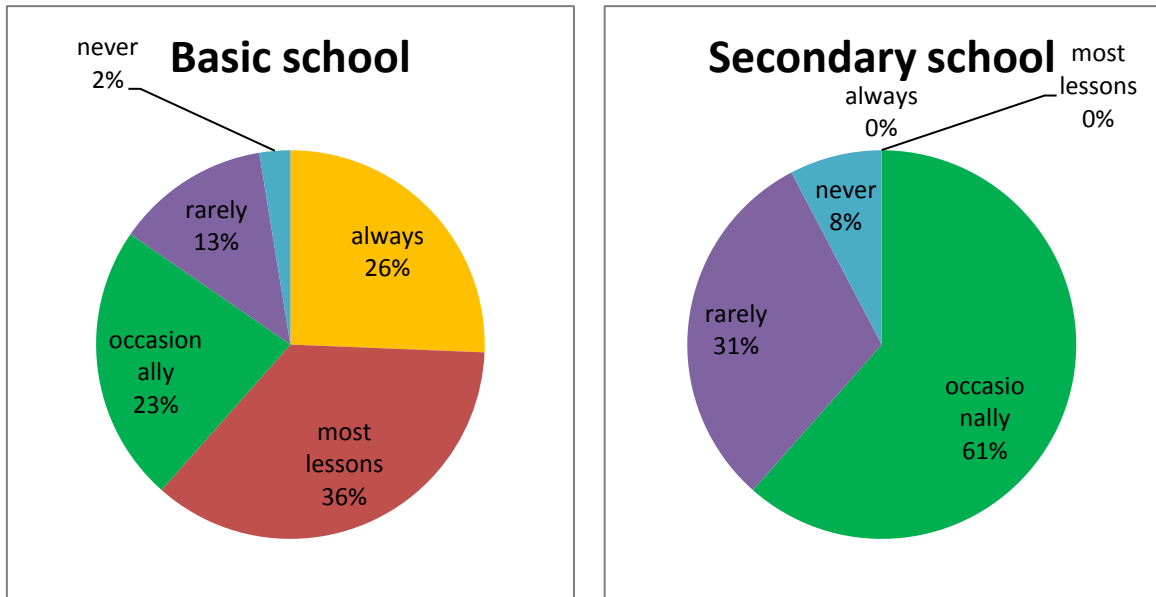
Figure 10. Availability of IWBs for English lessons at particular types of schools.

IX.3.2 Teachers and their digital competences

Figure 11 investigates what skills of digital competence the teachers already mastered. On the basis of teachers' previous experience they are placed into three broad groups, digitally illiterate, beginners and advanced users (cf. III. 1 Digital Competences). The question is if teachers who are digitally literate are willing to work with IWBs in their classes.

Firstly it is essential to categorize teachers according to their digital skills. Generally, teachers who are able to work only with internet or only with MS office are classified as beginners with the technology (7%). 91% of the educators belong to the advanced users. These teachers ticked two or more options from the offer in the questionnaire (see appendix 12, question number 5). The rest, 2% of teachers questioned, was digitally illiterate.
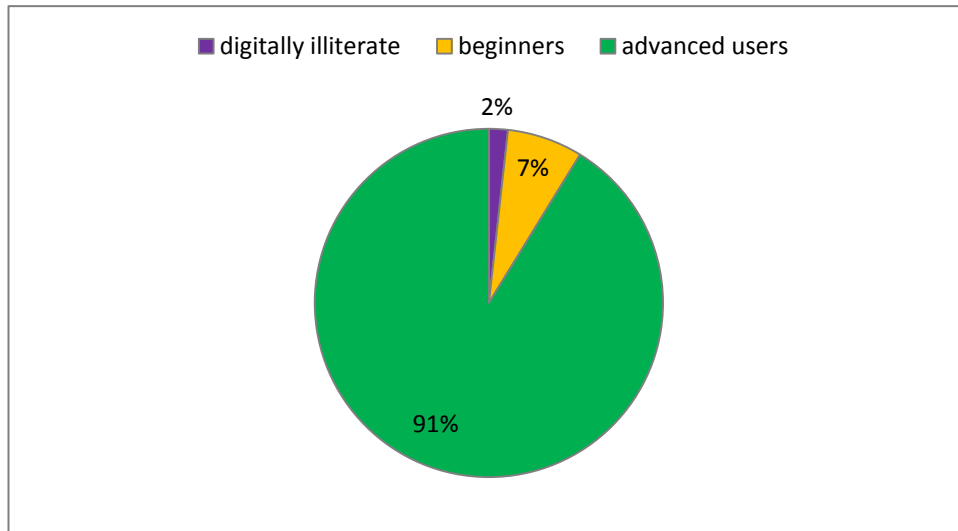
Figure 11. Level of teachers' digital competence.

Figure 12 shows that 16% of teachers who are advanced users of the technology do not work with IWBs in their lessons and that 25% of teachers who are minimally digitally competent do not use IWB during their classes.

Most of the teacher who are advanced with the technology and not using the IWB filled in the questionnaire that IWBs are available for them occasionally, rarely and never. Again, this might be the primary reason. What came as a shock was that the majority of beginners work with the IWB in their lessons, so, it is probable that they try to work with the modern technology in a way they know. Thanks to such behaviour they could improve their skills earlier.
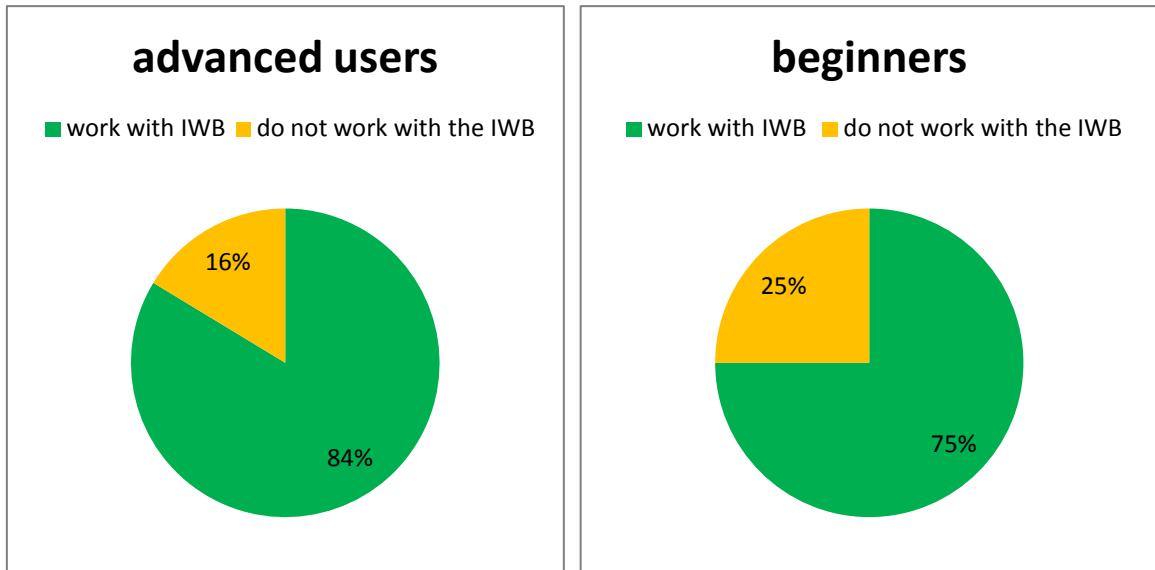
Figure 12. The impact of teachers' digital literacy on the IWB usage.

Summary

There cannot be seen big difference in usage of IWBs by beginners and advanced users. This result is not only surprising but also pleasing. Beginners have limited possibilities in the usage of digital media, though, they try to work with IWBs.

IX.3.3 Teacher training in IWBs

This section is focused on the teachers' formal training, its content (cf. IV.1 Training), its impact on the IWB usage during lessons and creation of home-made materials in IWB software. What I expected is that teachers trained in IWB usage use IWBs more often than those who were not trained that some parts of training might be more favoured than others and that training provided for teachers at some schools might be insufficient.

Figure 13 shows that out of 53 teachers whose school own at least one IWB 68% were given training in working on IWBs and 32 % were not.
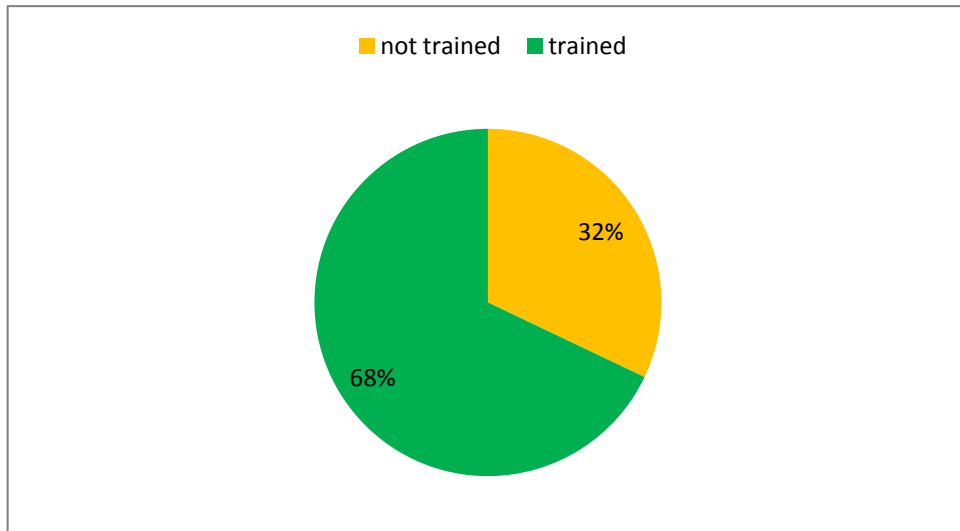
Figure 13. Teachers and their training in the work on the IWB.

Figure 14 shows the type of training teachers undertook. 66% represent teachers who undergone theoretical training in operating the board. The practical training in operating the IWB was received by 56% of respondents. More than half of the teachers got theoretical training in IWB software and 43% practical one. The training which specializes on didactic principles in particular subjects was undertaken by least teachers (28%).

The survey simply reflects the fact that formal training is based rather on theory than on practice. If teachers want to be good at operating the IWB and working in its software, they must learn it in their free time and use the IWB in almost all lessons. But we cannot blame teachers for lacking motivation in their self-study. In addition, subject specific training on didactic principles should not be missing for using the full potential of IWBs in lessons. Nevertheless the results show that only few teachers undergone it. Reasons for it might be that schools may think of it as unnecessary or that schools do not have enough money to invest in it.
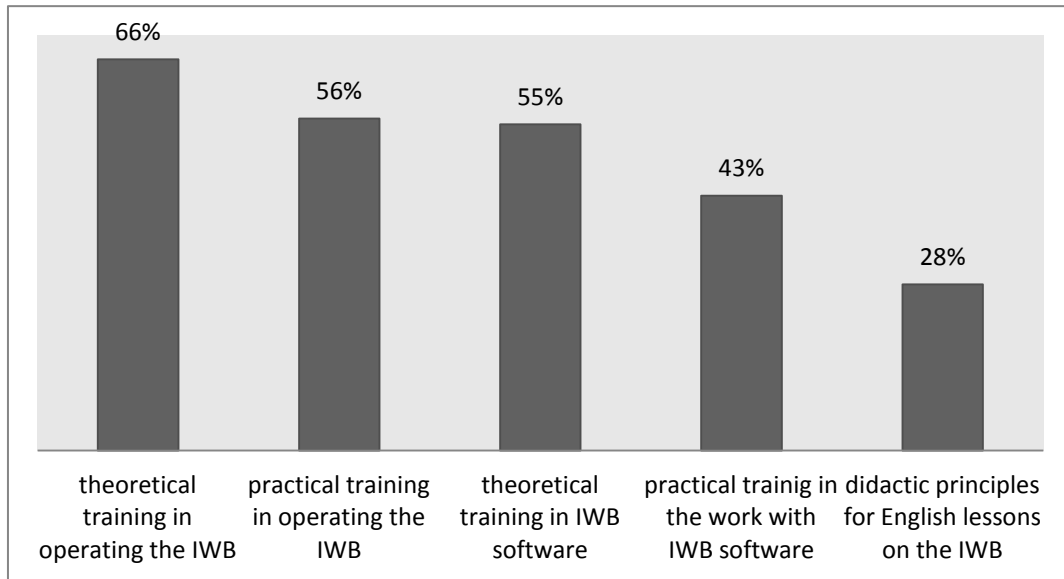
Figure 14. Type of IWB training which was completed by teachers.

More than half of the teachers out of those respondents whose school own some IWBs cannot prepare presentations in IWB software (see figure 15).
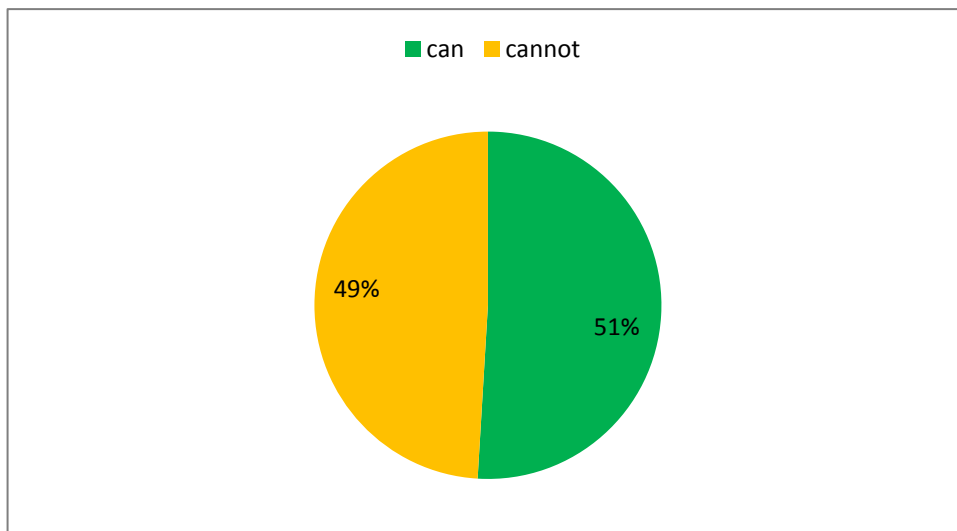
Figure 15. Teachers who can and cannot work with IWB software.

Figure 16 shows that, approximately one third of English teachers questioned who were trained how to work with IWB software cannot prepare presentations in it.

This simply reflects the fact that the training was insufficient. It is probable that teachers get only free basic courses from commercial suppliers when the IWB is bought. Schools cannot usually provide their teachers with additional training after spending considerable amount of money on new technology.
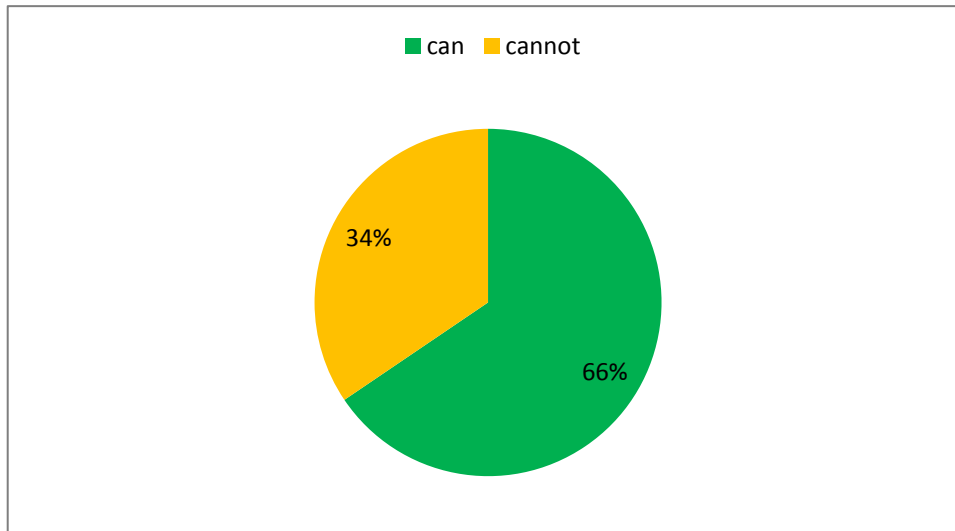
Figure 16. Teachers' ability to work with IWB software after the training.

The questionnaire filled in 7 teachers who had not received any IWB training, yet they were able to work with IWBs and prepare exercises in IWB software. So, it is very probable that they have to involve their time in self-study to be able to use the IWB in their lessons.

Summary

The impact of teachers' training in IWBs on their usage in lessons was predicted correctly. Only few people are willing to explore IWBs themselves.

There exist some aspects of teachers' training which are ignored in some cases. What might help teachers in IWB usage on everyday basis is better practical training and focus on didactic principles.

As it results from this analysis not all teachers who undergone the training in IWBs are confident in their use. This might imply that the training was really insufficient.

IX.4 Teachers' perceptions of IWBs

What should not be missing in this research are teachers' opinions on IWBs. The first part of this section deals with the degree of contribution of IWBs in English lessons. I assume that the longer and more intensive teacher's work with the IWB is the better mark it gets from him/her. The second part concentrates more on what teachers see as particular advantages and disadvantages of IWBs in their lessons.

Teachers' perceptions of IWBs are presented in Figure 17. The teachers were supposed to evaluate the IWB contribution in English lesson on a ten-point scale where number one implied minor contribution and number ten meant enormous contribution.

The first column (6,4) is overall assessment of all English teachers in the survey whose school own some IWBs. The evaluation of teachers who use IWBs in their English lessons is shown in the second column (6,6). The number 7,6 is an average contribution marked by those teachers who use the IWB at least once a week. An averagely highest mark (8,6) was given by English teachers who use the IWB every lesson.

In Figure 17 there can be seen the influence of teachers' experience with IWBs on their positive view of IWBs as the average contribution of IWBs in the graph increases with the frequency of its usage.
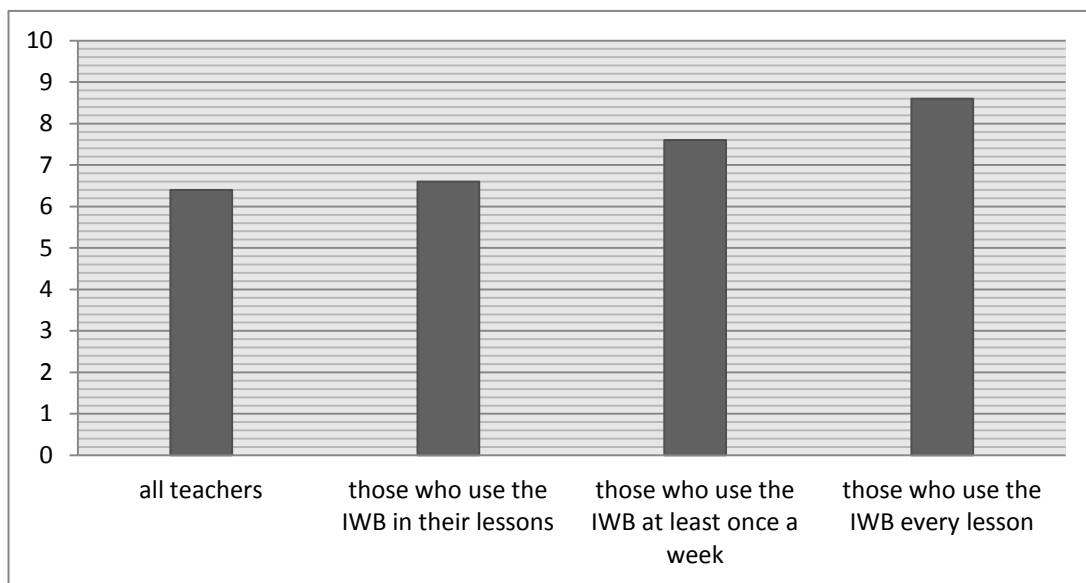
Figure 17. IWB contribution to English lessons according to the English teachers.

IX.4.1   Advantages and disadvantages of IWBs according to the English teachers

This part of the teachers' questionnaire analyses what do teachers like and do not like about IWBs, or in other words, what are IWBs biggest benefits and drawbacks. Each teacher who had at least some experiences with IWBs was supposed to write down two pluses and two minuses (see Appendices 2 and 4). I expect that most teachers' experiences and opinions on IWBs should be similar to the theory about IWB advantages and disadvantages (cf. VIII Advantages and disadvantages of IWBs). However, to find out what teachers like most and least might be very interesting. In addition, some new ideas may appear.

Advantages

The most often mentioned advantages (see appendix 3) are that lessons are more interesting and attractive (17) and that many resources are available for English lessons (11).

Nine teachers see as a considerable advantage possibility to employ new teaching methods. Answers of eight English teachers are included into the category 'Presented material is graphically clear and logically structured'. Eight respondents also answer that IWBs improve pupils' motivation. Six teachers mention the fact that pupils are more active when English lessons are taught with IWBs. Teachers also like the facility of IWB to save and reuse materials (4) and increased pace of the lesson (3). Two educators appreciate that it is easier to attract children's attention for the teacher. And a big benefit is also little need for copied materials (2). Some of the individual answers were 'It lightens the atmosphere in the class.', 'Less material must be stored in the office' or 'the IWB gives the teacher a wide scope for creativity.' In the questionnaire some unclear answers appear which were not categorised. For the overview of all these categorised answers see Appendix 3.

Altogether 16 respondents did not answer this question.

This part of research is very individual. Teachers usually name positive things about IWBs of which they can make use in the classrooms, which suits their teaching style and makes their lesson more varied. Results show teachers appreciate most that IWBs capture learners' attention and that they probably concentrate more during the lesson. Form the individual answers I would like to emphasize the one with scope for teachers' creativity as most original one and also true one. The answers of teachers who like about IWBs their interactivity were not included into any category as they do not seem to be crystal clear (cf. II The use of interactive whiteboards versus interactive teaching and learning).

Disadvantages

Categories of authentic answers from the teachers' questionnaire can be found in Appendix 5. Most often mentioned drawbacks are that only few pupils can work with the IWB at a time (11) and that the preparation for the lesson is time consuming (10). Next think teachers do not like about IWBs are technical problems encountered during lessons (6). Six teachers are bothered by inaccessibility of IWBs on everyday basis. Five teachers do not like that children concentrate more on the technology than on the subject matter. Unpleasant light coming out of the data projector (2) and shades on the board (1) are also mentioned by some respondents. A few teachers identify as problems that pupils do not want to work with the IWB (2) or that learners get easily bored and start to disturb when watching others interacting with the IWB (2). Some educators refer to difficulties in managing the board (2) and in using IWB software (2).

Twenty one teachers did not answer the question. All authentic answers can be found in Appendix 4.

Obviously, majority of teachers are bothered by the time they must spend on lesson preparation. This may be because they prepared their lessons on particular topic before the technology was used and now they must do it once again. Or a possibility is that they are beginners with IWB software and preparation takes while.

Teachers are also mostly afraid of unreliability of technology in the classroom. An effective solution to this problem is suggested in the first chapter (cf. I Interactive whiteboard characteristics). The reason for it might be that usually no other board to write on is available in case that something happens. Teacher's lesson preparation is then worthless s/he has to improvise till the end.

Some negative attitudes, difficulties in managing the board and in using IWB software, towards IWBs expressed by teachers are closely connected with poor teacher training. For example training in didactic principles with IWB should help the teacher to organize the work in the classroom to not have bored pupils.

Summary

Quite a lot of teachers did not fill anything in. Respondents who did not answer these questions are those who do not have many experiences with IWBs.

Almost all above mentioned benefits and drawbacks are comparable to the ones in the theoretical part (cf. VIII Advantage and Disadvantages of IWBs). Therefore, these results mostly agree with theoretical books and articles about IWBs.

Moreover, this chapter might also have an influence on IWB usage. Teachers' opinions might influence their approach. A teacher might have the IWB accessible but s/he does not use it as s/he does not see its advantages.

X   ANALYSIS OF PUPILS' QUESTIONNAIRE

X.1   Introduction

As the title suggests this questionnaire (see appendix 13) was designed for Czech pupils who have the possibility to use the IWB in their English lessons. Firstly, pupils were asked to compare a lesson with the IWB to one without it. I was interested in their opinions on how the IWB assist them during the learning process, too. The second part of the survey questioned pupils on their attitudes towards IWBs. Their opinions were then compared to teacher's ideas of what their pupils like about the IWB to find out whether they mach or not. During this research sexes of pupils are considered as I expect slight changes in their opinions with some answers.

Data for the analysis of pupils' opinions were gathered between September and October 2011. The targeted group were pupils from basic and secondary schools. Eighty-two paper copies were distributed at two schools where English is taught as a foreign language and all of them were returned.

The aim is to find out reasons why IWBs should be installed to English classroom, what pupils mainly appreciate on IWBs and if teachers know about it. And the summary should consider how much the IWB is helpful during the learning process.

X.2   Pupils compare lessons with the IWB and without it

In this section, pupils were asked to compare lessons with the ordinary whiteboard or blackboard and lessons with the IWB. I suppose that the use of IWBs in English lessons should have an impact on pupils' activity in the lesson and their positive view on learning.

Figure 18 implies that almost one half of the pupils questioned (49%) totally agree with the statement 'I like going up to the board more when we work with the IWB', and nearly one third of them (31%) generally agree with it. 18% are neutral about this statement and 2% of respondents disagree.

From this Figure it can be deduced that children usually adopt more positive attitudes towards going up to the IWB in comparison to the regular board. This result might have an influence on their activity in the classroom as children might be more motivated to go to the board and interact with the technology.
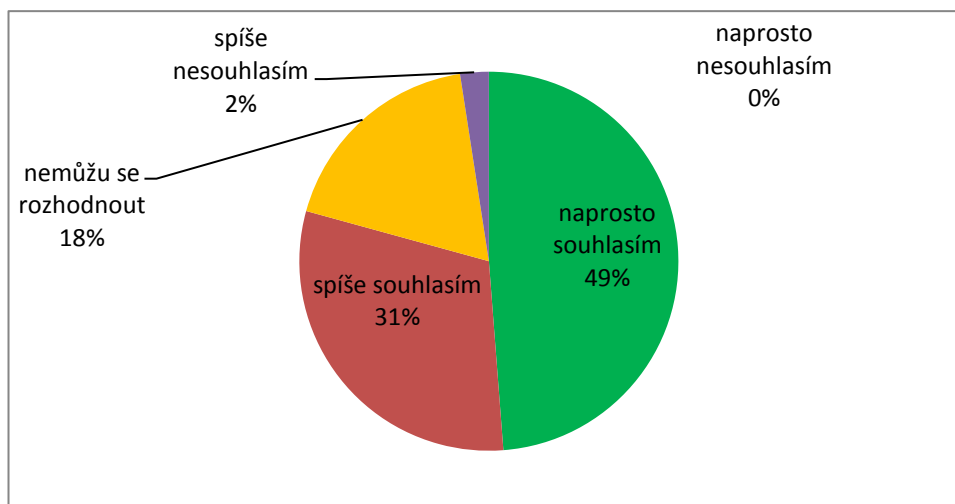
Figure 18. I like going up to the board more when we work with IWB.

Figure 19 shows that almost half of the respondents (45%) totally agree with the sentence 'The structure of lessons is logically organised and clearer when we use the IWB in English lessons.' 28% of pupils generally agree, 18% are neutral and altogether 9% disagree.

It is apparent that pupils consider the impact of the IWB usage on logical succession of subject matter in the lesson. What helps is probably presented material as teachers can prepare presentations for every lesson which might help pupils in directing their attention to particular issue (cf. V. 1.1 Content and structure of the presentation). In addition, the teacher can easily save the notes made in the lesson and use them in the following lesson to remind pupils of things which were done last time. (cf. VIII. 1.2 Advantages for teachers)
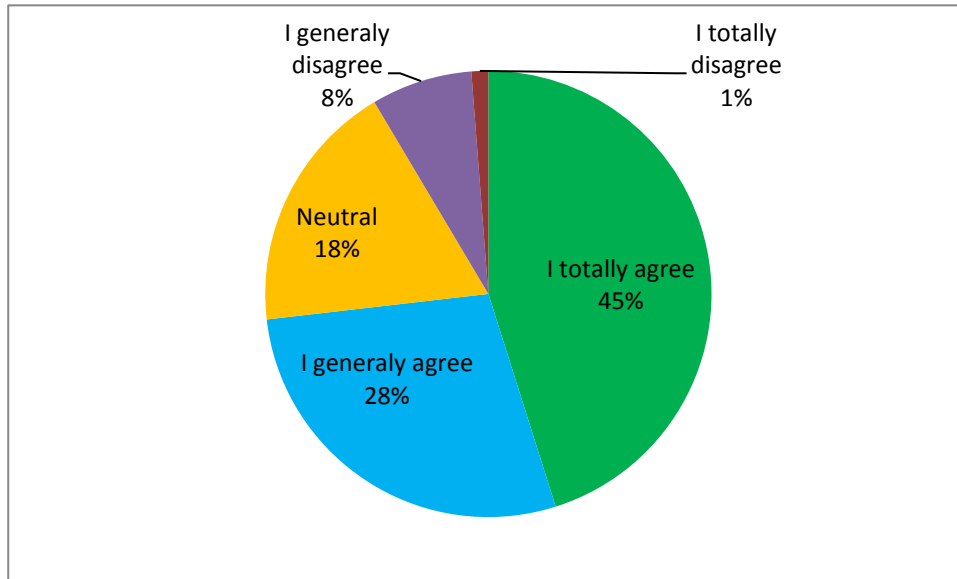
Figure 19. The structure of lessons is logically organised and clearer when we use the IWB in English lesson.

What Figure 20 shows is that 43% of pupils ticked the answer 'I totally agree' when responding to 'To understand the grammar is easier for me when it is presented on the IWB.' 22% of children generally agreed, 23% feel neutral and 12% disagree either generally or totally.

Grammar is more understandable when presented on IWB to almost two thirds of respondents. Again, I assume that some pre-prepared presentation and its organization can facilitate the pupils' learning and understanding. Of course, such material should follow some rules to make it even more effective (cf. IV Methodology principles concerning teaching English with IWB). Moreover, the teacher can accommodate the material to the pace and abilities of his students (cf. V 1.1 Home-made materials and shared home-made materials)
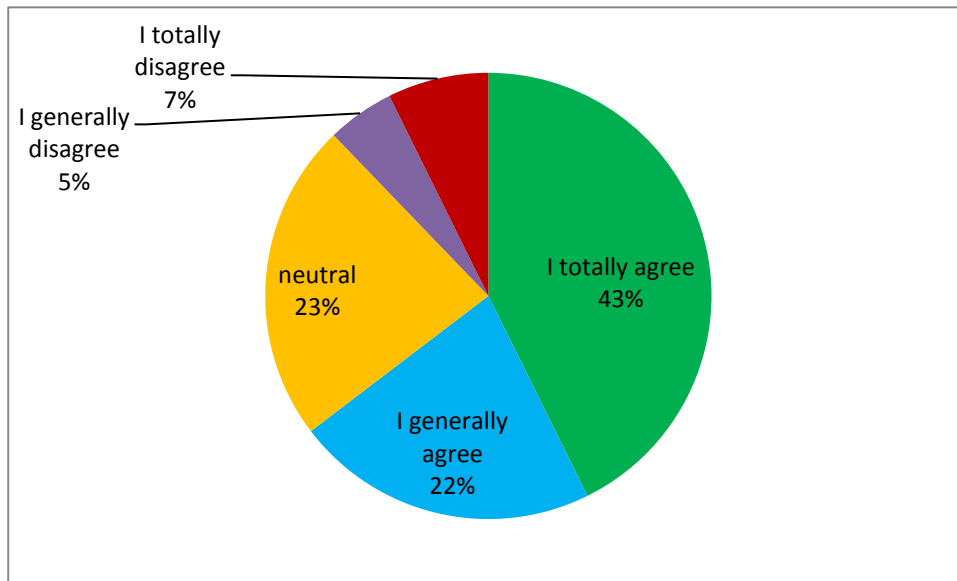
Figure 20. To understand the grammar is easier for me when it is presented on the IWB.

In Figure 21 the degree of pupils' agreement with 'To understand the vocabulary is easier for me when it is presented on the IWB.' is presented. Some pupils totally agree with it (29%), 40% of children generally agree, 29% of them stay neutral and a few pupils disagree (11%).

When the results from Figures 20 and 21 are compared a few pupils totally agree with understanding the vocabulary better. This result is quite surprising to me. I expected that more pupils would totally agree with this statement as IWBs provides numbers of visual stimuli, for example pictures representing individual words. However, this 'relatively' low figure may be because of different types of learners in the class. Not all of them must respond better to visual aids (cf. VIII.1.3 Advantages for learners).
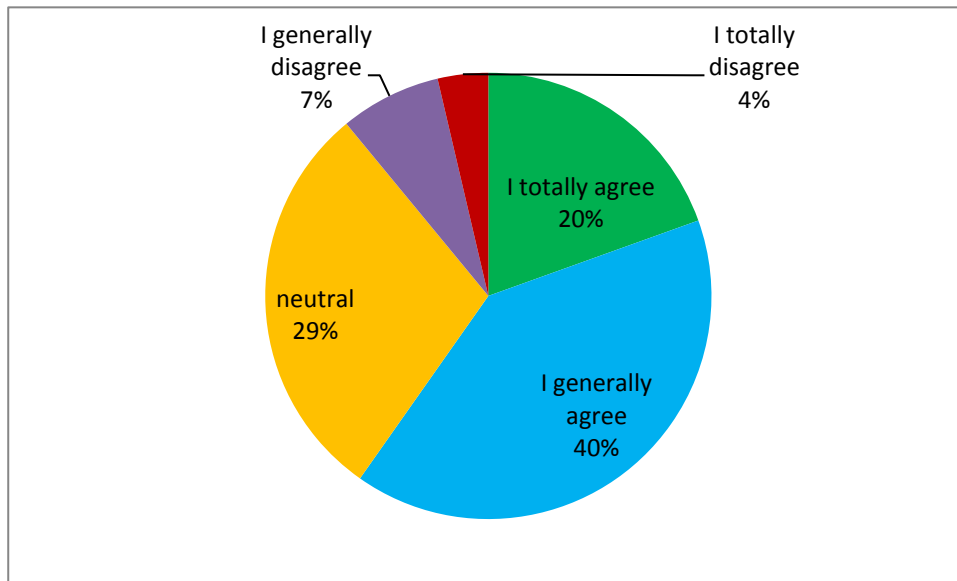
Figure 21. To understand the vocabulary is easier for me when it is presented on the IWB.

X.3   Pupils' perceptions of IWBs

The aim of this part is to find out whether pupils really like IWBs or not and consequently to learn what strengths and weaknesses of IWBs are from the point of view of pupils. Their opinions will be compared to teachers' opinions on what they think their pupils like about IWBs.

Figure 22 shows how much the pupils questioned agree with the statement 'I like working with the IWB'. Most pupils (63%) totally agree with it, 26% of children generally agree. A few pupils are neutral (6%) and 5% of pupils disagree.

These figures imply that most pupils like the work with IWBs. It seems to be the main motive for buying IWBs at schools. This might be the way how schools attract their children and show them that they try to make the educational process as friendly as possible.
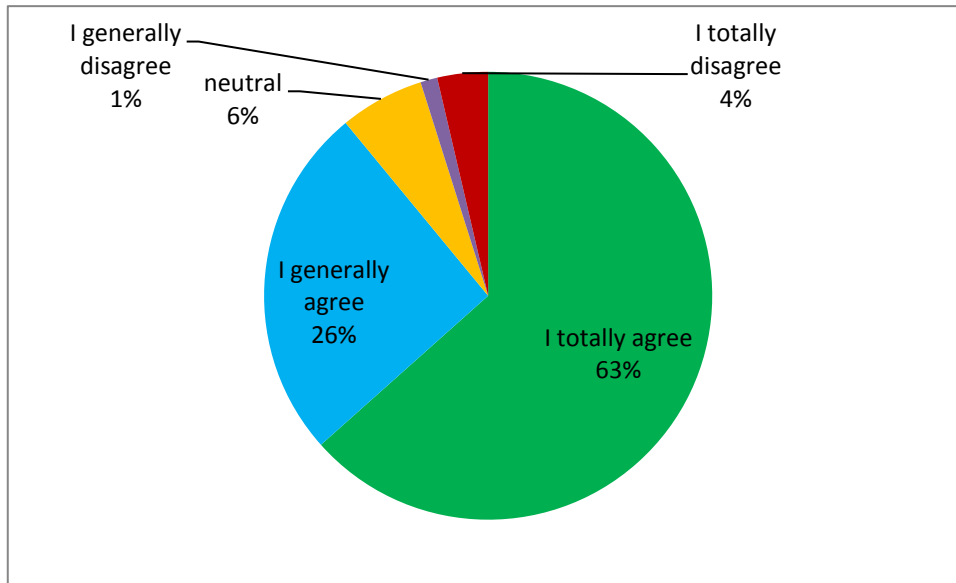
Figure 22. I like working with the IWB

X.3.1 What pupils like and do not like about lessons of English with the IWB

Both teachers and pupils should respond to this question. The teachers' answers are taken from their questionnaire (see appendix 12). For the overview of all authentic responses see Appendices 6, 7, 9 and 10. Also a list of teachers' answers, pupils' answers and then their categorising can be found there (see Appendices 8 and 11).

The teachers' and pupils' opinions concerning pupils' likes of IWBs (see Appendices 6 and 7) and dislikes (see Appendices 9 and 10) are divided into distinct categories. These categories mirror to some extent the advantages and disadvantages dealt with in the theory part (cf. VIII Advantages and disadvantages of IWBs) and the others are created on the basis of key words in respondents' statements. Examples of new categories are 'You are not covered by dust from chalk' or 'Some pupils do not want to work with the IWB'. Of course, not all answers seem perfectly clear therefore new classes are created to cover individual thoughts. Possible connections among categories are discussed in the Comparison.

The two charts (Appendices 8 and 11) are organised systematically. The first column describes number of teachers whose answers belong to one category and after a slash there is number of pupils' opinions which can be included into this category, too. Therefore, these two numbers capture the analogy between beliefs of the two groups. The second column consists of individual categories. Categories are ordered according to the frequency of pupils'

answers belonging to them. Teachers' answers included in particular groups can be found in the third column and pupils' answers in the fourth one.

I would like to find out if teachers really know what pupils see as IWB strengths. Neither pupils nor teachers were given any clues as I want to find out the real reason for liking IWBs (See appendix 12 question 10, appendix 13 question 6).

X.3.1.1   Teachers' opinions on what pupils like about IWB usage

According to nine teachers, pupils appreciate wealth of colours and pictures which can be presented on the IWB. Eight educators fall in the second category claiming that the IWB is modern gadget and students enjoy working with it. Access to internet and use of its full potential is mentioned by seven English teachers. Another seven teachers think that English lessons are more entertaining for pupils when the IWB is used. A wider variety of activities in the lesson is seen as a reason by six teachers. Five educators state that pupils like the possibility to watch videos on it. Three teachers think that pupils like most listening to various songs online. Four teachers believe that IWBs create a relaxed atmosphere for pupils. Presentations on grammar or vocabulary are clearer to children according to three teachers. The same amount of educators hope that a change of a traditional way of teaching is the main thing children like. Three teachers mention that pupils' activity and opportunity to move during the lesson should be motivating for them. Two teachers think that pupils like touching the board and moving objects. Some teachers talk about the advantages such as notes on the board are readable (2), pupils can take part in games and competitions on the IWB (1) and writing on the IWB is much more comfortable for pupils (1).

Fifteen teachers did not answer this question - they either do not use or hardly ever use IWBs.

X.3.1.2   Pupils' opinions on what they like about IWB usage

Pupils most often mention internet access (11) and listening to various songs in lessons (11) as IWB great benefits. Nine children like that English lessons with the IWB are more entertaining. Clearness of presentations on grammar and vocabulary is valued by nine pupils. Some learners like the variety of activities (8) and others watching videos (7). Seven pupils emphasize the fact that writing on the IWB is much more comfortable. Six children express that they like taking part in games and competitions on the IWB. Five learners are amazed by colours and pictures and another five pupils state that IWBs facilitate their learning. Three pupils notice a significant change in comparison with the classical way of teaching. Learners also like that their teacher has pre-prepared materials (3), lessons are enriched with sounds

(3), and that the IWB does not have to be cleaned (3). Few pupils (2) enjoy touching the board and dragging and dropping objects and one appreciates that notes on the IWB are readable. Three pupils like absolutely everything about IWBs.

Fourteen learners did not answer this question. For overview of all authentic answers see Appendix 7.

X.3.1.3   Comparison

If we look at the chart about pupils' likes (appendix 8) it can be deduced that teachers mostly know about what pupils see as IWB strengths.

Obviously, teachers are absolutely right about the learners' preferences in relation to the usage of internet in lessons. The usage of internet is also mentioned in the connection with using dictionaries, engaging in variety of activities, playing games, listening to music and watching videos on www.youtube.com.

The category of listening to songs, watching videos, taking part in games and competitions, undertaking variety of activities are not always linked to internet. Some might refer to material prepared in IWB software. These categories are also very popular with learners and teachers evidently are aware of them. As a result there is some overlap between these categories.

The learners answers prove that attitudes towards learning can improve (cf. VIII. 1.3 Advantages for learners). Pupils like lessons more because they are entertaining, they work with modern technology, they can do things they enjoy during lessons, for example listen to music, watch videos and use internet.

What exactly teachers do not mention is that IWBs can facilitate learning. Five pupils found it as an advantage of the IWB. However, this IWB benefit might be closely connected to other teachers' and pupils' answers falling into categories wealth of colours and pictures, watching videos, sounds, listening to songs, touching the board and moving objects. As some people remember things better when they see them, some when they hear them and others when they touch them and can move them (cf. VIII. 1.3 Advantages for learners). Therefore I assume that all mentioned categories can be also subordinate to the one 'IWBs facilitate learning'.

In addition, there are other advantages which may assist pupils during their learning process as well. Some educators predict that learners consider presentations on grammar or vocabulary clear. Children like them as they may readily understand the subject matter.

One of the IWB benefits stated only by pupils is that presentations can be prepared at home and showed in the classroom (cf. IV. 1 Planning lesson with the IWB). This might probably increase pace in the lesson as it usually takes a while when the teacher is writing long notes on the board. At that time pupils may get really bored. On top of that few pupils point out that notes typed on the IWB are more readable than teacher's handwriting.

The studied background reading has not emphasized enough the facts that:

- the IWB might assist pupils in their learning,

- pupils do not have to wait till the teacher finishes writing his/her notes on the board as presentation is prepared in advance,

- materials prepared in IWB software are clearer and easily readable,

- the IWB does not have to be cleaned.

X.3.1.4 Teachers' opinions on what pupils do not like about the usage of IWBs

Data provided by learners show that the most problematic IWB drawback is waiting for a turn (4). Next, three teachers think that shades on the board might bother pupils. According to three educators, the overuse of the IWB during lessons might be perceived negatively. Another three teachers refer to the fact that activities on the IWB must be taken seriously and responsibly by pupils (3). Some educators expect that pupils are annoyed by technical problems (2). Two respondents assume that problems with controlling the board discourage learners. The position of the board is also mentioned by few respondents (2). Two teachers think that pupils' enthusiasm related to the work with IWB quickly fades away. One teacher expects that health issues might be mentioned by pupils. Teachers cannot be expected to work with the IWB perfectly (1). One person also mentions typing words on the floating keyboard as disadvantage for learners.

Eight teachers are not sure about pupils' opinions and eighteen teachers did not answer this question. For all teachers' authentic answers see Appendix 9.

X.3.1.5 Aspect concerning pupils' dislikes about the usage of IWBs

What bothers pupils most are health issues (14) and technical problems (14). Seven pupils are afraid of problems with their controlling the board. Three of them do not like waiting for a turn. Shades on the board are mentioned by two pupils and also the fact that the

IWB is used too much is stated by few pupils (2). Two answers are not included in any category.

Eighteen pupils did not fill in anything. They might not see any disadvantages going along with the use of IWBs.

X.3.1.6   Comparison

Pupils (18) as well as teachers (34) do not show negative feelings about the use of IWBs. This may show that many respondents view the IWB only as the positive improvement of teaching and learning environment. Or they simply do not have enough experiences to feel competent to comment on any IWB's disadvantages.

Health issues, exactly headaches and eye ache, are mentioned by fourteen pupils. In teachers' questionnaire only one respondent says this. However, the theory talks about it, too (cf. VIII.2 Disadvantages). In my opinion, the reason why there are so many similar answers may be explained by the fact that these learners come from the same class. Even the English teacher who stated headache as the disadvantage belongs to the same school as the pupils. It is very probable that they already talked about headaches and eye ache together and therefore their answers might be quite influenced. But if it really causes headaches, the heath issues should be considered and the IWB may be turned off when it is not actually used.

Fourteen learners noticed technical problems with IWBs and find them annoying, two teachers predicted them (cf. VIII.2 Disadvantages). The reason for their displeasure is usually time spent on coping with technical difficulties. I expect that some learners might be bored during that time or they can lose their thread.

Controlling the board and shades on the IWB also bothers some learners. Theory does not emphasize these difficulties much as there are some ways to avoid them (cf. V.2.2 While teaching). And if the teacher follows them, pupils will become proficient in using technology soon.

Waiting for a turn is not very popular. Three pupils state that they do not like it. This disadvantage is not commonly mentioned in theoretical sources. IWB producers are probable aware of it because they produced also dual use IWB. It might be expected that teachers are trained and know how to manage effectively the work in the class (cf. V.2.2 While teaching).

One pupil feels that IWBs are overused during lessons. S/he does not like that teachers use it whole lesson without a pause. Three teachers give the same opinion.

Finally, to the disadvantages for learners I would add technical problems with IWBs which lowers the pace in the lesson, the overusing of the technology and initial difficulties with controlling the IWB and working with it.

X.4   Summary

To sum it up pupils enjoy their lessons with the IWB much more than with ordinary whiteboard. Teachers can make their classes more attractive by using modern technology, its accompanying software and internet access. The IWB facilitates pupils learning and gives them many opportunities.

Teachers are much more successful in guessing pupils likes than dislikes. But generally it is clear that teachers know pupils and their opinions very well.

XI   VALUE ANALYSIS OF IWB MATERIALS FOR ENGLISH LESSONS

XI.1   Introduction

Finally, there are analyses of IWB materials which were used during my teaching practice at a basic school. The chart in the Appendix 14 shows criteria to evaluate home-made materials for lesson with the IWB. The structured observation grid deals with used materials as well as with other aspects of the lesson with the IWB, though, this section focuses only on used materials created in IWB software.

When creating the criteria grid the following sources were consulted[173,174]. Klement et. al. create suitable areas for evaluation on the basis of right use of interactive material in the lessons. Some ideas from presentation layout and functional elements are generated from the theoretical part (cf. V Methodology principles concerning teaching English with the IWB and VII Facilities of IWB software) and others are stemming from my experience in teaching English with shared materials. The materials are evaluated with respect to the fact that they are shared with other teachers or that they might be shared in the future.

It is assumed that all materials created in IWB should stick to these principles. All of these materials are observed in use during a lesson. Altogether five presentations created in IWB software are evaluated. Three of them are collected materials from the supervising teacher which I observed during my teaching practice. The rest are materials prepared by myself to illustrate what might be done in IWB software. They were prepared according to the principles for shared materials (cf. VI.1.1 Home-made materials and shared home-made materials).

XI.2   Material analyses

Material analyses are divided into four sections. The first three parts, content and structure of the presentation, presentation layout and functional elements, describe only the results from the structured observation grid (see appendix 14). Sections called Comments explain results from observations in detail. In addition, Comments deal with the usage of created materials within the lesson, they summarize overall quality of the material and suggest what might be improved or changed. The Comments also show links to Appendices 15-19

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[173] KLEMENT, M. et al, 2010, s. 326-335.

[174] MOSS, G. et al, 2007, s. 13-15.

where examples of one slide from a particular presentation is placed. Complete presentations can be found on the enclosed CD.

All chosen materials were created in notebook software. The presentations used by the teacher in her lessons were all downloaded from the internet webpage www.veskole.cz. Firstly, materials the teacher used are evaluated and then two of my home-made presentations are to be examined.

1. Analysis of presentation Making questions in present continuous
Content and structure of the presentation

This presentation is designed for eleven or twelve-years-old pupils from the sixth grade. The topic of the lesson is making questions in the present continuous. This file practises language as a system as it specializes in collocations and grammar. The subject matter seems to be adequate to knowledge of the pupils in the class. The length of the presented material was adequate (see comments below). As there are three exercises the material is completed in ten to twenty minutes. The material is logically structured. The text is accurate without any noticeable typing errors. Explanations of the activities are written at the top of the slide.

Presentation layout

In the presentation sans serif typeface is used. The size of the font is not always big enough (from 12 to 20 points). The colours are in most cases contrastive, light brown and black. But in some cases dark blue shapes are backgrounds of the black text and it makes reading more difficult. Another difficulty is that there is quite a lot of text in one slide. Neither pictures nor animations are found in the presentation.

Functional elements

Some kind of interactivity can be found in the presentations, the results can be checked by dragging and dropping. The facilities needed for the preparation of the material were text tool, shapes, grouping, locking, and pictures from the picture gallery which is a special feature of notebook software.

Comments

If we look at this presentation (see appendix 15), it is not clearly specified in the description of the presentation whether it is a new topic or just revision, But the three activities show that it is the practice of the subject matter. It starts with exercises on collocations and word order in the sentence. The third activity combines both previous exercises and is more complex. The use of Czech explanations of activities could have been

avoided if there had been clear and self-explanatory examples. The practising teacher, however, transformed the instructions into English in the course of the lesson.

As for the readability, some children at the back seats might not feel comfortable enough. The text may be enlarged because there is enough space on the slide. The amount of text on a slide would not be that confusing, if bigger spaces among lines were created. Personally, I would suggest changing the combination of colours because it is not very attractive for younger pupils. Nevertheless, it cannot be expected that teachers have the same aesthetic taste.

Throughout the lesson the teacher and pupils used pen tool for writing the missing words and full screen mode for enlarging the slide. Although not many features of IWB were used within the presentation, the teacher in the classroom varied the lesson using different activities on IWB.

The material is simple but clear. What I like most is the exercise on word order when children move individual words and create correct sentences. This exercise might help tactile as well as visual learners.

2. Analysis of presentation Present tenses
Content and structure of the presentation

The material was downloaded from veskole.cz. It is aimed at the seventh grade. The topics are present aspects, simple and continuous. The aim of this material is to practise language as a system. Children should not have problems with the completion of the exercises. The teacher needs approximately ten to twenty minutes for its presenting. The structure is logical. The text is accurate. Activities in the presentation are explained.

Presentation layout

The sans serif typeface Arial is used which has approximate size from 21 to 24 points. Text and background colours are contrastive. The amount of text is over the established limits. Also some pictures are present in this file. There are no animations.

Functional elements

Interactive elements can be found there as Smart notebook teachers' toolkit is used. Interactive exercises of many kinds can be chosen from this set. They test various aspect of language according to teacher's wishes and imagination. The author of the material used mainly text tool, grouping, locking, shapes and pictures from the Smart notebook gallery.

Comments

The material (see appendix 16) is used for revision in the 8th grade in the observed lesson. The presentation is entitled Present tenses. I suppose that the author uses this simplified version 'present tenses' to make it easier for pupils to understand this grammatical feature. The presented material starts with revision of present aspects, their forms and use, and then the practice follows. Instructions for the teacher can be found at the beginning of the presentation. Where needed tasks are explained in English.

Although the amount of text exceeds the required limit (cf. Presentation layout), it is adequate with respect to what is presented. Pictures make the presentation more interesting for children but do not throw the light on the subject matter.

When the material is presented, pages are enlarged on full screen and pupils write on the board. The feature, hide and reveal, allows the pupils not only to move the objects but also to see the correct answers.

3. Analysis of presentation Project 2 U2 - vocabulary
Content and structure of the presentation

The third material is downloaded from the internet, too. It is aimed at pupils from the sixth grade. The title of this presentation, Project 2 unit 2 – vocabulary, does indicate that all vocabulary from the second unit in textbook Project 2 is revised, and so it is focused on language as a system. The subject matter is adequate and is logically structured. The time pupils need for its completions is in between twenty and thirty minutes. The text is accurate. In the file explanations of activities are missing.

Presentation layout

The typeface Comic sans is of size thirty six points. The colour of text contrasts with slide background. The amount of text on a slide is appropriate. Many pictures are used to illustrate the words.

Functional elements

The material itself is not interactive. Text tool, grouping, locking as well as shapes are evidently used by the author of the material. Some pictures come from the gallery others are probably downloaded from the internet.

Comments

This material practices vocabulary from a particular unit in the textbook the teacher uses in her classes therefore the subject matter should not be difficult for children.

The text is easily readable. It is colourful and enjoyable for kids. Thanks to the pictures the memory and learning of visual learners is supported (see appendix 17).

Functional elements are not much varied. There are two types of exercises. Firstly, pupils can check the results by dragging and dropping colourful squares which hide the correct answers. Secondly, there is a crossword quiz. The presentation lacks the solution to this exercise.

The material might be presented in ten to twenty minutes. However, the teacher uses different types of classroom management and it takes a while longer. Every child has the opportunity to interact with the board for quite a long time. There can be seen cooperation and the division of the work. The teacher in the class also adds some tasks such as 'use the word in a sentence'. Starting with the revision of vocabulary and ending with crossword quiz the presentation structure is coherent. The lack of author's explanations probably gives the teacher a wider scope for creativity.

4. Analysis of presentation Ordinal numbers

Content and structure of the presentation

As the title suggests, the topic is ordinal numbers. The file concentrates on both language as a system and language skills. This material is supposed to be the introduction of the ordinal numbers, the level is adequate to the knowledge of pupils in the classroom. It takes from ten to twenty minutes to complete. The structure is logical. The material seems to be fairly accurate and without noticeable typing errors. The explanations of activities are given in English.

Presentation layout

The average size of the Calibri font is twenty eight. The used colours are contrasting. The amount of the text on a slide meets the requirements. There are lots of pictures and also moving animations can be found there.

Functional elements

The presentation has interactive elements in it. During the preparation of the material tools such as text tool, shape tool, links, locking, screen shade, screen capture and grouping, were used. Some pictures were borrowed from the gallery, some downloaded from the internet. Moreover, a video is enclosed as a file and is inserted in the presentation.

Comments

This is a home-made material which is not shared anywhere on the internet. To see a sample slide presentation find Appendix 18.

Throughout the presentation children revise ordinal numbers as the part of grammar and also speaking and listening skills are practised. Logical staging of listening activity starts with a pre-listening exercise, where vocabulary is revised, then while-listening exercise follows and after-listening exercises come at the end. The presentation is clearly readable from the back seats. Even the colours are not disturbing. Although activities are explained, every teacher can accustom his/her teaching style to them. The comments are mainly suggestion what might be done to ease teacher's preparation. The pictures which can be seen in the presentation are illustrative and might help pupils to get new ideas.

More features of IWB software are used in the material in comparison with the previous ones. Links are created within the material and they make the presentation interactive. Through clicking on probable answers pupils get immediate feedback. When used in the classroom facilities such as full screen mode, pen tool, playing the video and annotating can be found.

5. Analysis of presentation Present continuous - revision
Content and structure of the presentation

The aim of this presentation is to revise the present continuous in the eighth grade. It practises language skills as well as language system. The subject matter should be quite simple for thirteen or fourteen-years-old pupils. From twenty to thirty minutes are needed for presenting the material, which is logically organized with an accurate text. The activity explanation is provided in English in the presentation.

Presentation layout

Type of the font is Calibri and the Size is twenty six points and more. The background colours contrast with the text colours. The amount of text does not exceed the limits. Many pictures can be found in the presentation and one animation is used as part of the last slide.

Functional elements

Also an interactive element can be found in the material. Functional elements which are used during preparation are text tool, shapes, grouping, locking, screen shades, hyperlink, screen capture, inserting pictures, and videos.

Comments

It is the same case as with the previous material. It is home-made and not shared. An illustrative page can be found in the Appendix (number 19).

The presentation revises pupils' previous knowledge of the present continuous. Without using mother tongue pupils can guess from pictures what the words mean. In addition, visual

learners are supported. Tactile learners are advantaged when dragging and dropping objects. Animation at the end stimulates pupils to pay attention even by the end of the lesson.

Quite a lot of features of IWB software are used within this material. This presentation was piloted in the lesson of English and mainly pen tool highlighting and full screen mode were demonstrated.

XI.3   Summary

Content and structure

As for the topic, my experience with shared materials is that authors mostly concentrate on teaching language as a system rather than practising language skills. Although not many samples of shared materials are evaluated in this chapter, this assumption can be also accepted.

The adequacy of the subject matter in the presentation depends more on the teacher in the classroom than on the presentation author. The teacher should know his/her pupils and be able to choose a suitable material.

During the lesson where all these materials were used teachers do not need more than thirty minutes for its presentation. The length of these materials was therefore suitable for the lessons.

Most of these presentations do not have any mistakes. But piloting is always recommended before sharing the material to avoid spelling and factual mistakes in the file.

Some materials include instructions for the teachers what to do with activities and some not. In my opinion, it is not necessary to have description of all activities. However, it must be crystal clear what to do with them. The best solution is to show an example. To illustrate my point, there might be used one of IWB features such as page record. In addition, the explanations should be given in English as it seems unnecessary to use the mother tongue in foreign language classroom. If pupils do not understand the teacher has many possibilities how to explain them, for example to ask somebody to translate the instructions.

Presentation layout

The presentation layout depends on the authors' taste and knowledge of the principles. It is always the evidence his/her proficiency in this field and ability to interest others.

What is most important is an easy readability. Some authors of presentations do not pay special attention to it. But small size of font and inappropriate colours might tire the eyes of pupils and probably this may cause their headache and eye ache.

The restriction of the amount of the text might be more liberal as it depends on the complexity of the subject matter the educator presents. But still we must agree that the more clearly arranged presentations are the better.

Functional elements

The most often used features are text tool, shapes, grouping, locking, Smart notebook gallery, and screen shades. The underutilized features are hyperlinks, annotations, page record and usage of sounds within the presentation. The reasons for the underuse might be that some features are useless in certain lessons or that teachers do not want to spend so much time on material preparation.

Last comments

The prerequisite for the material analysis is that materials are created to be shared. To use shared home-made materials teachers always need to know how to manage IWB software. The main advantage of sharing is that teachers do not have to spend so much time on material preparation.

On the other hand, looking at these analyses it is obvious that the teacher must always go through downloaded presentations before the lesson because not everything follows widely accepted principles.

Everything depends on the teacher and his/her teaching style. S/he must be able to use the full potential of the IWB to help pupils in learning. The teacher can vary materials as s/he likes.

CONCLUSION

Generally, it can be concluded that most of the basic and secondary schools in the Czech Republic own at least one IWB. Although schools have IWBs, the amount of them is insufficient. Therefore, some English classrooms naturally remain unequipped as there are many other subjects of similar demands.

As expected the biggest influence on IWB usage in English lesson has its accessibility. Teachers are discouraged when they have to book the room with IWB in advance.

Clearly, the supposition that the ability to work with the IWB is based on teachers' mastered digital competences was confirmed. The advanced users of computers are undoubtedly advantaged in comparison with beginners and digitally illiterate teachers. Nevertheless, everything depends on teacher's approach to the modern technology, teaching and his/her willingness to learn new things.

When speaking of teaching experience, results are quite surprising. People new to the profession, who are supposed to be digitally literate, use the IWB less often than experienced teachers.

IWB use in classes is also influenced by poor teacher training in IWBs. In most cases, the training is based more on technical manipulation of the board and work with the IWB software but the didactic aspects in individual subject are mostly ignored. This raises a question whether teachers should be more prepared for operating the IWB as well as for the teaching with this technology.

As for the attitudes, teachers have mostly positive attitudes toward IWBs. They appreciate especially that is captures learners attention and that they do not have to focus on it. In the main, their points of view agree with the theoretical sources dealing with IWB advantages and disadvantages.

Furthermore, pupils enjoy working with the IWB. They notice that it is helpful for them as it facilitates their learning. What they pinpoint as the biggest benefit is internet access ad everything which relates to it, for example, listening to music, watching videos and taking part in online activities. Since teachers are professionals they know most of pupils' likes and dislikes.

Educators should be inspired by these facts and prepare lessons according to pupils interests. If teachers use material which was not created by them they should explore it and accustom it to their classes.

In conclusion, the IWB is beneficial not only for pupils but also for teachers. Pupils' digital competences are improved by everyday IWB usage. Children perceive the IWB as attractive and it is seen as a positive change in their learning environment. What is more, new technology in the classroom can be motivating for teachers. This might be proved by the fact that also teachers who are beginners with information and communication technology try to use the IWB in their lessons. Even those who were not trained in IWB manipulation show their effort by learning it step by step by themselves. It is an important stereotype change.

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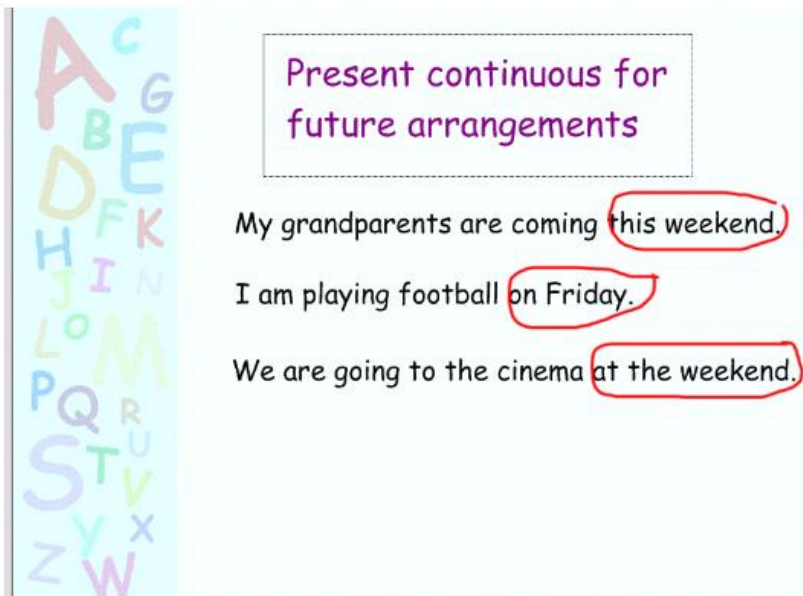
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APPENDICES

Appendix 1
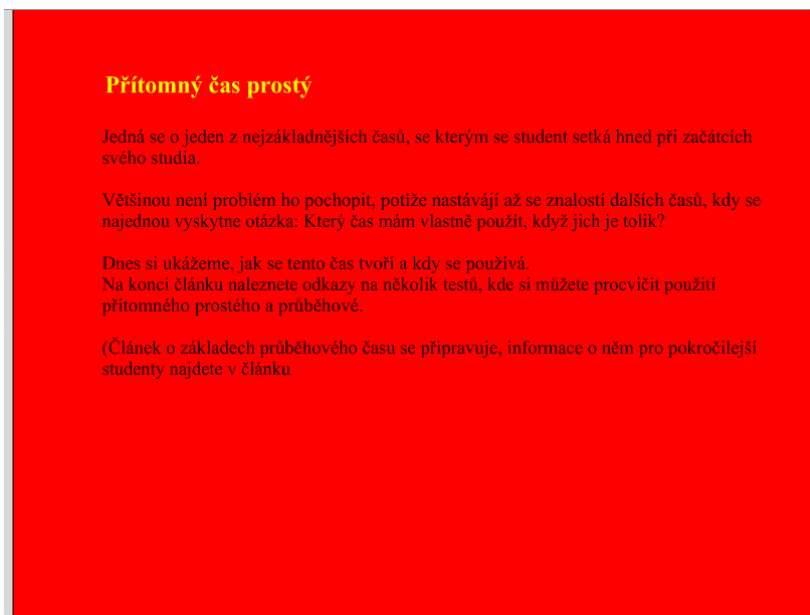
An example of good practice

An example of bad practice

Appendix 2

Authentic answers from the teachers' questionnaire

	Co se Vám líbí na interaktivní tabuli?
1	nepráší se od křídy, žáci jsou více motivovaní
2	přitažlivý způsob prezentace a procvičování učiva
3	aktivita žáků, kteří se jsou jindy méně aktivní
4	děti jsou akční, hodina je zajímavější
5	mohu si připravit soubor kvalitních příprav na hodinu
6	moderní, atraktivní, efektivní
7	je názorná, opravdu interaktivní, změna pro žáky, atraktivita
8	oživení výuky, využití jiné formy a metody učení....
9	změna, motivace žáků
10	názornost pro žáky je to zábavné
11	prezentace gramatiky, cvičení, různé hry; šetří čas v hodině
12	Nová motivační forma výuky, předem připravené materiály urychlují tempo hodiny
13	interaktivní učebnice obsahuje audio i video, doplňková cvičení, většina zábavnou formou, odkazy na internet
14	zajímavé, zábavné, pestré
15	názornost, možnost kreativity
16	Materiály pro žáky se nemusí kopírovat
17	oživení hodiny
18	Možnost použít hotové i-tools, motivuje žáky
19	atraktivita pro žáky, zpestření výuky, motivační prvek
20	Oživí hodiny, další způsob motivace, stimulace
21	jiné médium pro zprostředkování jazyka
22	aktivní zapojení studentů, změna ve stereotypu hodiny, názornost
23	Nemohu hodnotit
24	Motivace, prezentace reálií, možnost aktuálně pracovat s internetem
25	množství materiálů a aplikací na internetu, jednoduchá tvorba příprav
26	můžu obohatit výuku a zábavná cvičení + internet, poslech
27	Pestrost, využití internetu
28	usnadnění práce, materiály si můžu předpřipravit, paj už je jen spouštím; zajímavá cvičení, zapojení internetu, videa, nahrávání, časovač
29	větší aktivita žáků, pozornost
30	zábavnost formy
31	žáci jsou aktivní, program lze vylepšit základními funkcemi a akcemi (cross word quiz, multiple choice)
32	úžasná akčnost, děti z prvního stupně jsou nadšené
33	přehlednost, názornost
34	obrázky, interaktivita
35	aktivizace žáků, nová technologie ve výuce

Co se Vám líbí na interaktivní tabuli?	
36	aktivity samotné zpestřují výuku
37	Pro žáky je to zpestření
38	zpestření výuky, zajímavé pro žáky, metody
39	použití internetu,
40	Nový přístup k výuce, vše mám zálohováno na počítači- nepotřebuji tolik dalších pomůcek
41	využití internetu v hodinách, prezentace žákovských prací, anotace videa
42	nové vyučovací techniky, žáci mohou být více aktivní, odeagování žáků pomocí game-like activities, něco se naučí, a přesto si hrají
43	Jenoduché zapojení internetu do hodin, online cvičení na internetu, není taková spotřeba papíru
44	žáci se více soustředí na hodinu

Appendix 3

Categories of authentic answers from the teachers' questionnaire

Number of respondents	Teachers like about IWBs-categories	Teachers' opinions
17	Lessons are more interesting and attractive	přitažlivý způsob prezentace a procvičování učiva; hodina je zajímavější; atraktivní; změna pro žáky, atraktivita; oživení výuky; zajímavé, zábavné pestré; oživení hodiny; atraktivita pro žáky, zpestření výuky; oživí hodiny; Pestrost; zábavnost formy; obrázky; aktivity samotné zpestřují výuku; Pro žáky je to zpestření; zpestření výuky; zajímavé pro žáky; moderní; nová technologie ve výuce
11	More resources are available for English lessons	interaktivní učebnice obsahuje audio i video, doplňková cvičení, odkazy na internet; Možnost použít hotové i-tools; možnost aktuálně pracovat s internetem; množství materiálů a aplikací na internetu; můžu obohatit výuku a zábavná cvičení internet, poslech; zajímavá cvičení, zapojení internetu, videa, nahrávání, časovač; použití internetu; Jenoduché zapojení internetu do hodin, online cvičení na internetu,
9	New teaching methods	využití jiné formy a metody učení; hry, cvičení; cvičení a hry; jiné médium pro zprostředkování jazyka; změna ve stereotypu hodiny; nové metody; Nový přístup k výuce; nové vyučovací techniky;
8	Presented material is graphically clear and logically structured	je názorná; názornost; názorná prezentace gramatiky; názornost prezentací gramatiky; názornost; názornost; přehlednost; názornost

Number of respondents	Teachers like about IWBs-categories	Teachers' opinions
8	IWBs improve pupils' motivation	žáci jsou více motivovaní; změna, motivace žáků; Nová motivační forma výuky; Nová motivační forma výuky; motivuje žáky; motivační prvek; Motivace, další způsob motivace, stimulace
6	Pupils are more active	děti jsou akční; aktivní zapojení studentů; větší aktivita žáků; žáci jsou aktivní; žáci mohou být více aktivní, aktivizace žáků aktivita žáků, kteří se jsou jindy méně aktivní
4	Presentations are prepared at home and can be saved for the future use	vše mám zálohováno na počítači; mohu si připravit soubor kvalitních příprav na hodinu; jednoduchá tvorba příprav; když jsou materiály předem připraveny, spoří čas
3	The pace of the lesson is increased	šetří čas v hodině; předem připravené materiály urychlují tempo hodiny; usnadnění práce, materiály si můžu předpřipravit, paj už je jen spouštím
2	There is a little need for copied materials	Materiály pro žáky se nemusí kopírovat; není taková spotřeba papíru
2	Pupils pay more attention	pozornost žáků; žáci se více soustředí na hodinu
1	IWB gives the teacher a wide scope for creativity	možnost kreativity
1	You are not covered by dust from chalk	nepráší se od křídy
1	Some features of IWB software are very useful during a lesson	odkazy na internet
1	Less material must be stored in the office	nepotřebuji tolik dalších pomůcek
1	It lightens the atmosphere in the class	odeagování žáků pomocí game-like activities, něco se naučí, a přesto si hrají
2	unclear answer	opravdu interaktivní; interaktivita;

Appendix 4

Authentic answers from the teachers' questionnaire

	Co se Vám nelíbí na interaktivní tabuli?
1	Aktivizace omezeného počtu žáků, soustředění pozornosti na nástroj výuky, nikoli obsah.
2	časová náročnost přípravy, početné skupiny při výuce na tabuli nemohou pracovat všichni žáci najednou
3	vždy je lepší materiály vyzkoušet předem
4	velká časová náročnost při přípravě vlastních materiálů
5	neefektivní zapojení žáků, časově náročná příprava vlastních materiálů, nutnost stěhování a bookání učebny s IWB. Kdybych mohla pracovat s IWB v každé hodině (př. jen 5-10 min.) bylo by to jiné; Dávám přednost využití internetu, aktivitám přes moodle (tzn. Bílá tabule + dataprojektor + internet.
6	časově náročné přípravy, zapojeni v hodině většinou jen jedinci
7	náročnější na čas
8	mnoho cvičení zapojuje jen jednoho žáka (ve skupině o 23 lidech je to velké mínus)
9	zapojuje jen ty žáky, kteří chtějí pracovat s tabulí
10	Učebny vybaveny IWB jsou obsazeny přírodovědnými předměty. Výhledově snad přibude i čistě jazyková učebna s IWB. Osobně používám multimediální učebnu, zejména s maturitním ročníkem.
11	ne všechny děti se chtějí zapojit (2.st.), někdy bojuji s technikou a pak je nutná improvizace
12	Abych se cítila při práci s IW sebevědomě, potřebovala bych možnost ji používat v každé hodině alespoň chvilku, třeba jen na jednu aktivitu - nedostupnost na každodenní bázi je dle mého názoru nejvíce odrazující skutečností pro práci učitele s interaktivní tabulí. Také mi nevyhovuje varianta AKTIVboard, kterou ve škole máme. Program se mi zdá příliš komplikovaný, ve srovnání se SmartBoard, kterou jsem měla možnost vyzkoušet na některých školeních.
13	někdy neberou žáci aktivity na interaktivní tabuli "vážně", spíše jen jako formu hry, a tudíž jim nevěnují dostatečnou pozornost
14	U nás ve škole jsou všechny interaktivní tabule naprosto nelogicky umístěny v učebnách chemie, biologie, fyziky a matematiky. Takže v jazycích je vyzužívat nemůžeme.
15	omezený počet žáků, kteří mohou pracovat najednou
16	zabírá příliš času, chtějí se vystřídat všichni žáci a nemají trpělivost čekat
17	příliž časově zatěžuje učitele -příprava s tabulí pracuje jeden žák, max dva, ostatní mohou vyrušovat
18	nevím, jak tabuli správně používat, protože jsem nikdy nebyla na žádném školení a sama jsem se do objevování nepustila
19	časté poruchy na tabuli, neumím s tabulí pořádně zacházet
20	Časová náročnost přípravy, nejsem si jistá v práci s programem
21	pokud si nedám pozor, pracuje vždy jen jeden žák u tabule a ostatní koukajíH
22	z osvětlení mě bolí oči
23	někdy žáci berou tuto práci jako ulívání se, zapojení malého počtu žáků
24	stínění na tabuli, tabule se nedá zvednout je napevno ukotvená ke zdi, děti při psaní i klečí na zemi
25	Selhání techniky, nejde proud, tabule nefunguje

	Co se Vám nelíbí na interaktivní tabuli?
26	délka přípravy
27	časová náročnost při spouštění tabule a programu, špatně se mi s tabulí pracuje nejsem technický typ
28	více práce
29	je to spíše forma zábavy
30	žáci berou vždy tabuli jako hru
31	nelze zapojit všechny najednou
32	není nutná, v angličtině je potřeba mluveného projevu, používaná spíše na prezentace
33	dostupnost interaktivní tabule
34	záření projektoru
35	internet často nefunguje, technika selhává, musí se udržovat (práce navíc)
36	tabuli už používat umím, ale na vlastní prezentace si netroufnu, používám práce kolegů
37	příprava na hodinu trvá dlouho
38	lepší by bylo kdybychom měli tabuli naistalovanou přímo v jazykové učebně, stěhování je náročné

Appendix 5

Categories of authentic answers from the teachers' questionnaire

Number of respondents	Teachers do not like about IWBs - categories	Teachers' opinions
11	Only few pupils can work with the IWB at a time	nelze zapojit všechny najednou; zapojení malého počtu žáků; pokud si nedám pozor, pracuje vždy jen jeden žák u tabule a ostatní koukají; s tabulí pracuje jeden žák, max dva, ostatní mohou vyrušovat; omezený počet žáků, kteří mohou pracovat najednou, mnoho cvičení zapojuje jen jednoho žáka, Aktivizace omezeného počtu žáků, neefektivní zapojení žáků,
10	Preparation for the lesson is time consuming	příprava na hodinu trvá dlouho; délka přípravy; Časová náročnost přípravy; příliž časově zatěžuje učitele -příprava, náročnější na čas, časově náročné přípravy, časově náročná příprava vlastních materiálů, časová náročnost přípravy, velká časová náročnost při přípravě vlastních materiálů
6	Technical problems	internet často nefunguje, technika selhává; Selhání techniky, nejde proud, tabule nefunguje; časté poruchy na tabuli; někdy bojuji s technikou a pak je nutná improvizace
6	The IWB is not accessible to my classes every lesson	lepší by bylo kdybychom měli tabuli naistalovanou přímo v jazykové učebně, stěhování je náročné; dostupnost interaktivní tabule; U nás ve škole jsou všechny interaktivní tabule naaprosto nelogicky umístěny v učebnách chemie, biologie, fyziky a matematiky. Takže v jazycích je vyzůžívat nemůžeme.; nedostupnost na každodenní bázi je dle mého názoru nejvíce odrazující skutečností pro práci učitele s interaktivní tabulí; Učebny vybaveny IWB jsou obsazeny přírodovědnými předměty. Výhledově snad přibude i čistě jazyková učebna s IWB.; nutnost stěhování a bookání učebny s IWB,
5	Pupils are concentrated on the IWB (technical device) not on the subject matter	někdy neberou žáci aktivity na interaktivní tabuli "vážně", spíše jen jako formu hry, a tudíž jim nevěnují dostatečnou pozornost; soustředění pozornosti na nástroj výuky, nikoli obsah.; žáci berou vždy tabuli jako hru; je to spíše forma zábavy; někdy žáci berou tuto práci jako ulívání se,
2	Light coming out from the data projector is unpleasant to the eyes	z osvětlení mě bolí oči; záření projektoru

Number of respondents	Teachers do not like about IWBs - categories	Teachers' opinions
2	Pupils watching others interacting with the IWB get easily bored and start to disturb	s tabulí pracuje jeden žák, max dva, ostatní mohou vyrušovat; střídání zabírá příliš času, chtějí se vystřídat všichni žáci a nemají trpělivost čekat
2	Some pupils do not want to work with the IWB	ne všechny děti se chtějí zapojit (2.st.), zapojeni v hodině většinou jen jedinci, zapojuje jen ty žáky, kteří chtějí pracovat s tabulí
2	I have problems with operating the board	neumím s tabulí pořádně zacházet, špatně se mi s tabulí pracuje nejsem technický typ nevím, jak tabuli správně používat, protože jsem nikdy nebyla na žádném školení a sama jsem se do objevování nepustila
2	I cannot work with IWB software	tabuli už požívat umím, ale na vlastní prezentace si netroufnu, používám proto práce kolegů; nejsem si jistá v práci s programem
1	IWB software Activboard is more complicated than Smart board	Také mi nevyhovuje varianta AKTIVboard, kterou ve škole máme. Program se mi zdá příliš komplikovaný, ve srovnání se SmartBoard, kterou jsem měla možnost vyzkoušet na některých školeních.
1	Some material created in IWB software which can be downloaded from internet are not very reliable	vždy je lepší materiály vyzkoušet předem
1	IWBs need technical support and it is an additional work.	technika selhává, musí se udržovat (práce navíc)
1	I do not like shades on the board.	stínění na tabuli
1	The board is firmly fixed in a position and it is impossible to change its height.	tabule se nedá zvednout je napevno ukotvená ke zdi, děti při psaní i klečí na zemi
1	It is not necessary to have one in English lesson, conversation is much more important.	není nutná, v angličtině je potřeba mluveného projevu, používaná spíše na prezentace
	irrelevant answer	Osobně používám multimediální učebnu, zejména s maturitním ročníkem; Dávám přednost využití internetu, aktivitám přes moodle (tzn. Bílá tabule + dataprojektor + internet.

Appendix 6

Authentic answers from the teachers' questionnaire

	Co si myslíte, že se líbí Vašim žákům na používání interaktivní tabule při výuce angličtiny?
1	moderní, zábavná, možnost neustále běhat k tabuli a nesedět v lavici
2	zažívat nové věci
3	Žáci jsou ze začátku z interaktivní tabule nadšení, ale po pár hodinách nadšení opadne a interaktivní tabuli berou jako naprostou samozřejmost stejně jako notebook, IPhone, IPad atd.
4	možnost hrát hry
5	je to pro ně podobné jako PC, interaktivní, barevné
6	netypická hodina, odlehčení
7	vizuální podnět, lépe se pamatuje
8	interackce s moderní technologií
9	jiné materiály než v učebnici, písničky, hry, názorná výuka, možnost se projít v hodině :-)
10	Nemohu hodnotit
11	Možnost hrát hry a soutěže, prezentace obrázků, odpočinek od práce s učebnicí
12	s technologií umí pracovat některé děti lépe než já, rádi mě něco nového učí
13	čitelnost písma, obrázky, možnost pohybovat s objekty
14	přesouvání objektů, velké obrázky, psaní na tabuli
15	rozmanitost při výuce, hry, cvičení- DUM)
16	Pestrost, odlehčení
17	zapojení internetu, videa
18	aktivně pracovat s technikou, barevnost, obrázky
19	zábavnost
20	využívání internetu k pouštění písniček a videí, online cvičení
21	volnost hodiny, barevnost
22	soutěžení, hraní her, zábavná cvičení
23	zapojení moderní technologie do výuky
25	práce s technologií
26	hry, aktivity, uvolněnější atmosféra
27	hry, soutěže
28	zkoušení probíhá formou her
29	zpestření výuky
30	dotykovost, moderní technologie, je to zpestření výuky
31	zapojení internetu do hodiny, pouštění videí, písniček
32	zápisy jsou čitelné a přehledné
33	hodina je pro ně zajímavější, pracují s moderní technologií
34	dostupnost internetu, pouštění videa
35	dostupnost většího množství informací na internetu, hry
36	hry, internet-video, vizuálně zajímavá prezentace
37	pohyb, zpestření hodiny
38	odklon od clasického vyučování, využívání morní technologie
39	internet, obrázky, hry, soutěže, které se používají při výuce
40	že je to barevné, interaktivní

Appendix 7

Authentic answers from the pupils' questionnaire

	Co se ti líbí na hodinách, ve kterých pracujete s interaktivní tabulí?
1	přístup k internetu
2	posouchání písniček
3	přehlednost
4	přípojení na internet
5	nic
6	je to zábavný, přehlednější
7	dá se na ni dělat spousta věcí
8	je to mnohem zábavnější než práce s učebnicí
9	písničky, cvičení
10	písničky, je to velký, obrázky
11	písničky, filmy
12	písničky, videa
13	dávám větší pozor při hodině
14	líbí se mi příprava, např. písničky a jejich překlady
15	je to barevné a se zvukem
16	možnost přehát nebo vyhledat něco na internetu
17	je to ve formě her a lépe se to pamatuje
18	přehlednost, zvuk, cvičení
19	přehlednost, zvuk k různým cvičením
20	je to docela zábavné
21	že se z toho lépe učí
22	je to docela zábava
23	je to přehledné, barevné, logičtější než na normální tabuli
25	psát na interaktivní tabuli, používání internetu
26	posloucha na youtube písničky
27	líbý se mi všechno, líbí se mi když posloucháme písničky
28	hraní her, pouštění videí
29	je to přehlednější, používání internetu
30	cvičení, pouštění písniček na youtube
31	jsou dopředu nachytané zápisy, pouštění videí
32	přehled na tabuli, pouštění videa na youtube
33	neskřípe křída
34	píše se mi na ni líp než na normální
35	na IT je více možností, můžeme jít na internet
36	pouštění videí na youtube a hrát hry s English slovíčkami
37	celkem vše
38	lépe se na ni píše, používání internetu
39	že se na ní dají hrát hry
40	práce s internetem
41	je to přehledné a dotykové
42	lépe se z toho učí
43	můžeme na internetu volně hledat slovíčka

Co se ti líbí na hodinách, ve kterých pracujete s interaktivní tabulí?	
44	je to celkem zábava
45	lépe se mi učí slovíčka, líbí se mi celá IT
46	tužky, obraz
47	práce je přehlednější, mnohem lepší než práce s učebnicí
48	zábava, lépe to přečtu
49	přehlednost
50	internet
51	můžeme na ni hrát různé hry a věci; sranda
52	píše se mi lépe, nemusí se mazat
53	všechno, net
54	nemusí se mazat, pouštění písnišek
55	písničky, videoklipy
56	písničky a videa z youtube
57	nějaká zajímavá cvičení
58	dobře se na ni píše
59	barevnost, z obrázků se mi dobře učí slovíčka
60	nemusím čekat až se napíšou zápisy na tabuli
61	baví mě hrát hry a dělat nějaký cvičení
62	můžeme si všechno najít na internetu
63	často se pouští písničky a videa
64	baví mě psaní na tabuli, možnost hýbat s obrázky ručně
65	je to zábavnější než normální hodina
66	všechno se mi líbí
67	internet
68	nemusí se mazat
14	nevyplněno

Appendix 8

Categories of authentic answers from the teachers' and pupils' questionnaire

Number of teachers/ number of pupils	What pupils like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
7/11	**Internet access**	dostupnost většího množství informací na internetu; dostupnost internetu; internet-video; internet; zapojení internetu; zapojení internetu do hodiny; využívání internetu k pouštění písniček a videí	přístup k internetu; přípojení na internet; možnost přehát nebo vyhledat něco na internetu; požívání internetu; používání internetu; používání internetu; práce s internetem můžeme na internetu volně hledat slovíčka; na internetu se dají ukázat věci najednou celé třídě; net; můžeme si všechno najít na internetu; internet; internet
3/11	**Listening to songs**	písničky; pošťení písniček; využívání internetu k pouštění písniček a videí	posouchání písniček; písničky; písničky; písničky; písničky a jejich překlady; polouchat na youtube písničky; líbí se mi když posloucháme písničky; poslouchání písniček na youtube; pouštění písniček; písničky; písničky; často se pouští písničky
7/9	**Lesson are more entertaining**	hodina je pro ně zajímavější; zpestření; zábavnost; Pestrost; zábavná; zpestření hodiny; zpestření výuky	je to zábavný; je to mnohem zábavnější než práce s učebnicí; je to docela zábavné; je to docela zábava; je to celkem zábava; mnohem lepší než práce s učebnicí; zábava, sranda; je to zábavnější než normální hodina

Number of teachers/ number of pupils	What pupils like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
3/9	**Presentations on grammar or vocabulary are clearer**	názornost; zápisy jsou přehledné; čitelnost písma;	přehlednost; je to přehlednější; přehlednost; přehlednost; přehledné, logičtější než na normální tabuli; přehled na tabuli; je to přehledné; práce je přehlednější; přehlednost
6/8	**Variety of activities**	aktivity; nová cvičení; jiné materiály než v učebnici; zažívat nové věci; zajímavá cvičení; rozmanitost při výuce	cvičení; dá se na ni dělat spousta věcí; cvičení; cvičení; na IT je více možností, můžeme jít na internet; můžeme na ni hrát různé hry a věci; nějaká zajímavá cvičení; baví mě dělat nějaký cvičení
5/7	**Watching videos**	pouštění videa; internet-video; zapojení videa; pouštění videí; využívání internetu k pouštění písniček a videí	videa; filmy; poštění videí; pouštění videí; pouštění videa na youtube; pouštění videí na youtube; videoklipy; videa z youtube; často se poští videa
1/7	**Writing on the IWB is much more comfortable**	psaní na tabuli;	psát na interaktivní tabuli; píše se mi na ni líp než na normální; lépe se na ni píše tužky; píše se mi lépe; dobře se mi píše; baví mě psaní na tabuli; neskřípe křída
1/6	**Taking part in games and competitions**	soutěžení, hraní her	je to ve formě her a lépe se to pamatuje; hraní her; hraní her; hrát hry s English slovíčkami; hrát hry; baví mě hrát hry

Number of teachers/ number of pupils	What pupils like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
9/5	**Colours and pictures**	je to barevné; pictures; barevnost; barevnost, obrázky; velké obrázky; prezentace obrázků; je to barevné barevné; pictures; obrázky- vizuální podnět se lépe pamatuje	obrázky; je to barevné, se zvukem; barevné; obrázky; barevnost
0/5	**IWBs facilitate learning**		dobře se z toho učí; je to ve formě her a lépe se to pamatuje; lépe se z toho učí; lépe se mi učí slovíčka; z obrázků se mi dobře učí slovíčka
3/3	**Change in classical way of teaching**	odpočinek od práce s učebnicí; odklon od clasického vyučování; netypická hodina	je to mnohem zábavnější než práce s učebnicí; je to zábavnější než normální hodina; mnohem lepší než práce s učebnicí;
0/3	**Pre-prepared materials**		líbí se mi příprava, např. písničky a jejich překlady; jsou dopředu nachytané zápisy; nemusím čekat až se napíšou zápisy na tabuli
0/3	**Sounds**		je to se zvukem; zvuk; zvuk ke cvičením
0/3	**The board does not have to be cleaned**		nemusí se mazat; nemusí se mazat; nemusí se mazat,
0/3	**Everything**		celkem vše; celá IT se mi líbí; všechno se mi líbí
2/2	**Touching the board and moving with objects**	přesouvání objektů; dotykovost	je to dotykové; možnost hýbat s obrázky ručně
2/1	**Notes are readable**	zápisy jsou čitelné a přehledné; čitelnost písma;	lépe to přečtu
0/1	**Children pay more attention**		dávám větší pozor při hodině
0/1	**Nothing**		nic

Number of teachers/ number of pupils	What pupils like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
8/0	**IWB is modern technology student enjoy working with it**	pracují s moderní technologií; práce s technologií; zapojení moderní technologie d výuky; aktivně pracovat s technikou; využívání morní technologie; interackce s moderní technologií; je to pro ně podobné jako PC moderní, moderní technologie	
4/0	**Creates relaxed atmosphere**	uvolněnější atmosféra; volnost hodiny; odlehčení; odlehčení	
3/0	**Activity, movement during the lesson**	pohyb; možnost se projít v hodině :-); možnost neustále běhat k tabuli a nesedět v lavici	
1/0	**Presented material is attractive**	vizuálně zajímavá prezentace	
1/0	**Some pupils like to learn their teachers new things with the technology**	s technologií umí pracovat některé děti lépe než já, rádi mě něco nového učí	
2/0	**Unclear answer**	je to interaktivní; interaktivní	
1/0	**Irrelevant**	Žáci jsou ze začátku z interaktivní tabule nadšení, ale po pár hodinách nadšení opadne a interaktivní tabuli berou jako naprostou samozřejmost stejně jako notebook, IPhone, IPad atd.	
15/14	**Blank**		

Appendix 9

Authentic answers from the teachers' questionnaire

	Co si myslíte, že se nelíbí Vašim žákům na používání interaktivní tabule při výuce angličtiny?
1	když s ní učitel neumí dokonale zacházet, když je na interaktivní tabuli založena veškerá práce v hodině
2	brát jednotlivé aktivity vážně a zodpovědně
3	žíci mají problémy s ovládáním
4	stěžují si na nepříjemné záření tabule a bolest očí
5	nutnost vypisovat slovíčka pomocí klávesnice
6	čekat až na ně přijde řada, pokud nepřijde, jsou naštvaní (především ti mladší)
7	tabule je příliš nízko, špatně se na ni píše
8	nevím
9	technické problémy s tabulí
10	dělala jsem si průzkum a žádná negativa mi nenapsali
11	nevím
12	Jazyková cvičení Čekání až na ně přijde řada.
13	nevím o ničem
14	že tabule někdy nefunguje
15	u tabule je vždy jen jeden
16	také je bolí oči, vrhání stínu, umístění tabule
17	někteří učitelé ji využívají často, pak už žáci nechtějí
18	stínění, nevhodná výška tabule
19	nevím
20	myslím, že se jim líbí celkem vše
21	s tabulí se pracuje celou hodinu
22	práce se stylusem, obvykle znáčknou tlačítko nechtěně, nejsou dostatečně zruční (hl. mladší žáci)
23	špatně se jim na tabulli píše
24	při počtu dvaceti se na všechny nikdy nedostane
25	práce s tabulí je brzy omrzí
26	nevím
27	cvičení jsou hodnoceny známkami
28	pokud musí s tabulí pracovat jinak než si hrát (gram. cvičení)
29	nevím
30	časem vše zevšední
31	používá se málo
32	moc s tabulí nemohou pracovat díky dostupnosti
33	stínění na tabuli, neumí se mu vyhnout
34	nevím

Appendix 10

Authentic answers from the pupils' questionnaire

	Co se ti nelíbí na hodinách, ve kterých pracujete s interaktivní tabulí?
1	bolí mě z toho oči
2	bolí mě z toho oči, taky hlava
3	je to často rozbitý
4	bolí mě z toho oči
5	bolí oči
6	bolí mě z toho hlava
7	bolí mě z toho oči
8	tabule se často rozbíjejí a jsou dle mého názoru drahé a zbytečné
9	když se postavím k tabuli, tak se mi to stínuje a musím se různě ohybat, abych na ni viděl
10	bolí mě oči
11	bolí z toho oči
12	bolí z toho oči
13	bolí mě z toho oči, někdy blbnou
14	nejde na to psát
15	když se dívám celou hodinu do IT, protože mě pak bolí oči
16	moc to svítí, je to nepříjemné a bolí z toho oči
17	když něco nejde nebo nefunguje, ztrácí se čas
18	nic
19	nic
20	občas se seká
21	nic
22	že na IT trávíme celou hodinu
23	že je to vybledlé a nemá to zářivou barvu
25	nic
26	nelíbí se mi, že se na ni špatně píše
27	nic
28	špatně se mi píše
29	nic
30	trvá déle než se tabule zapne
31	hůře se mi píše, špatně se mi přetahují rámečky s odpovědí
32	nic
33	je občas neposlušná
34	je pomalejší než normální tabule (pomalu se načítá, píše)
35	nic
36	ujíždí to, blbě se píše
37	nic
38	asi spíše nic
39	někdy se to sekne a pak už nic
40	občas vypadává spojení
41	špatně to píše
42	mockrát se k tabuli nedostanu
43	nic

Co se ti nelíbí na hodinách, ve kterých pracujete s interaktivní tabulí?	
44	nědy se sama vypne
45	nic
46	nic
47	nic
48	až tak často se k IT nedostanu
49	projekční světlo, kazí se oči
50	že to svítí do očí a pak mě bolí
51	někdy píše špatně
52	nic
53	nic
54	bolí mě z toho oči, ale jen když to máme dýl
55	bolí mě z toho oči
56	někdy nefungují tak, jak mají
57	často se kazí
58	k tabuli se dostanu jen párkrát
59	moc se mi nedaří pohybovat s obrázky
60	trvá to něž se zapne
61	nic
62	nic
63	bolí mě z toho oči, protože musí být tma ve třídě, aby na ni bylo vidět
64	moc to svítí, je to nepříjemné a bolí z toho oči
18	nic

Appendix 11

Categories of authentic answers from the teachers' and pupils' questionnaire

Number of teachers/ number of pupils	What pupils do not like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
1/14	**Health issues**	bolí je z toho oči,	bolí mě z toho očí; bolí mě z toho oči, taky hlava; bolí mě z toho oči; bolí oči, bolí mě z toho hlava; bolí mě z toho oči; bolí mě oči; bolí mě z toho oči; bolí z toho oči; bolí mě z toho oči; když se dívím celou hodinu do IT, protože mě pak bolí oči; moc to svítí, je to nepříjemné a bolí z toho oči; projekční světlo, kazí se oči; bolí mě z toho oči, protože musí být tma ve třídě, aby na ni bylo vidět; moc to svítí, je to nepříjemné a bolí z toho oči
2/14	**Technical problems**	technické problémy s tabulí; že tabule někdy nefunguje	tabule se často rozbíjejí; je to často rozbitý; někdy blbnou; když něco nejde nebo nefunguje, ztrácí se čas; občas se seká; je občas neposlušná; někdy se to sekne a pak už nic; občas vypadává spojení; nědy se sama vypne; někdy nefungují tak, jak mají; často se kazí; trvá déle než se tabule zapne; je pomalejší než normální tabule (pomalu se načítá, píše); trvá to něž se zapne
2/7	**Problems with controlling the board**	špatně se jim na tabulli píše; práce se stylusem, obvykle zmáčknou tlačítko nechtěně,	nejde na to psát; špatně se mi píše; nelíbí se mi, že se na ni píše špatně; hůře se mi píše, špatně se mi přetahují rámečky s odpovědí; ujíždí to, blbě se píše; špatně to píše; moc se mi nedaří pohybovat s obrázky

Number of teachers/ number of pupils	What pupils do not like about IWBs - CATEGORIES	Teachers' opinions	Pupils' opinions
4/3	**Waiting for a turn**	při počtu dvaceti se na všechny nikdy nedostane; u tabule je vždy jen jeden; Jazyková cvičení Čekání až na ně přijde řada.; čekat až na ně přijde řada, pokud nepřijde, jsou naštvaní (především ti mladší)	mockrát se k tabuli nedostanu; až tak často se k IT nedostanu; k tabuli se dostanu jen párkrát
3/1	**Shades on the board**	stínění na tabuli, neumí se mu vyhnout; stínění,; vrhání stínu	když se postavím k tabuli, tak se mi to stínuje a musím se různě ohýbat, abych na ni viděl
3/1	**IWB is overused**	někteří učitelé ji využívají často, pak už žáci nechtějí; když je na interaktivní tabuli založena veškerá práce v hodině; s tabulí se pracuje celou hodinu	že na IT trávíme celou hodinu
0/2	**Not categorised**		jsou dle mého názoru drahé a zbytečné; že je to vybledlé a nemá to zářivou barvu
3/0	**Activities on the IWB must be taken seriously and responsibly**	pokud musí s tabulí pracovat jinak než si hrát (gram. cvičení); cvičení jsou hodnoceny známkami; brát jednotlivé aktivity vážně a zodpovědně	
2/0	**Position of the board**	výška tabule; umístění tabule	
2/0	**Enthusiasm for the work with IWB is quickly lost**	časem vše zevšední; práce s tabulí je brzy omrzí	
1/0	**Teachers cannot work with it perfectly**	když s ní učitel neumí dokonale zacházet	
1/0	**Typing words on the floating keyboard**	nutnost vypisovat slovíčka pomocí klávesnice	
8/18	**I do not know**	dělala jsem si průzkum a žádná negativa mi nenapsali	nic

Appendix 12

Teachers' questionnaire

Univerzita Palackého v Olomouci, PdF   Bc. Tereza Vlkovičová

Využívání interaktivní tabule při výuce angličtiny
dotazník k diplomové práci

Dobrý den,

jmenuji se Tereza Vlkovičová, jsem studentkou pedagogické fakulty Univerzity Palackého v Olomouci. Ve své diplomové práci se zabývám využívání interaktivních tabulí při výuce anglického jazyka.

Dotazník, který máte před sebou, obsahuje otázky týkající se Vašich zkušeností s interaktivními tabulemi, Vašeho názoru na jejich efektivnost při výuce anglického jazyka, a jeho vyplnění by Vás nemělo stát více jak 15 minut času.

Za Váš čas a pozornost předem děkuji.

1. Jak dlouho pracujete jako učitel angličtiny?

Méně než 5 let	5 až 10 let	10 a více let

2. Jaká je adresa školy, na které v současnosti pracujete?

....

3. Kolik interaktivních tabulí se nachází ve Vaší škole?

0	2	4
1	3	5 a více

   3.1. Pokud nějaké vlastní, jaké typy interaktivních tabulí to jsou?(označte všechny typy)

SMART board	eBeam	Starboard
ACTIVboard	Numonics	Nevím
Mimio	Interwrite	Jiné

   3.2.Pokud máte na škole více typů interaktivních tabulí, se kterou se Vám pracuje nejlépe?

SMART board	Numonics
ACTIVboard	Interwrite
PolyVision	Starboard
Mimio	Vyhovuje mi jiná než uvedené
eBeam	Nikdy jsem ji nepoužil

   3.2.1. Proč se Vám s daným typem tabule pracuje nejlépe?

   ....

   3.3. Je interaktivní tabule běžně dostupná pro Vaše hodiny angličtiny?

Vždy	Občas	Není
Většinou	Výjimečně	

4. Využíváte při hodinách angličtiny interaktivní tabuli?

Ano   Ne

   4.1. Pokud ano, jak často ji využíváte při hodinách angličtiny v jedné třídě?

Každou hodinu	Jedenkrát za měsíc
Jedenkrát týdně	Jednou za půl roku

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4.2. Vedete-li hodinu angličtiny s využitím interaktivní tabule, kolik minut s tabulí pracují žáci?

0 min.   10-20 min.

10 min.   20 a více

5. Jak ovládáte práci na počítači? (můžete zaškrtnout všechny možnosti)

Umím pracovat s kancelářskými programy (Word, PowerPoint, Excel a další)

Ovládám práci s internetem a elektronickou komunikaci

Umím instalovat programy

Umím svá data zálohovat a chránit proti zneužití

6. Byli jste proškoleni pro práci s interaktivními tabulemi?

Ano   Ne

6.1. Pokud ano, vyberte, co vše bylo obsahem školení?

Prezentace ovládání interaktivní tabule

Praktické vyzkoušení ovládání interaktivní tabule

Prezentace programu pro práci s interaktivní tabulí

Praktické vyzkoušení práce s programem pro interaktivní tabuli

Ukázka didaktických postupů pro hodiny AJ při práci s interaktivní tabulí

7. Umíte vytvářet cvičení pro interaktivní tabule (např. v programech SMART Notebook, ActivStudio)?

Ano   Ne

8. Ohodnoťte přínos interaktivní tabule pro výuku angličtiny na stupnici od 1 do 10 - hodnota 1 vyjadřuje nejmenší přínos.

1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10☐

9. Co se Vám líbí a nelíbí na používání interaktivní tabule při výuce angličtiny? (Uveďte prosím, alespoň dva příklady)

Líbí se mi   ……………………………………………………………………….

                        ……………………………………………………………………….

Nelíbí se mi   ……………………………………………………………………….

                        ……………………………………………………………………….

10. Co si myslíte, že se líbí a nelíbí Vašim žákům na používání interaktivní tabule při výuce angličtiny? (Uveďte prosím, alespoň dva příklady)

Žákům se líbí   ……………………………………………………………………….

                        ……………………………………………………………………….

Žákům se nelíbí   ……………………………………………………………………….

                        ……………………………………………………………………….

Appendix 13

Pupils' questionnaire

Práce s interaktivní tabulí v hodinách angličtiny

Odpovědi na otázky 2-8, prosím, zakroužkuj podle následující stupnice.

1- naprosto souhlasím	2- spíše souhlasím	3- nemůžu se rozhodnout	4- spíše nesouhlasím	5- naprosto nesouhlasím

1. Chodíš k tabuli raději, když pracujete na interaktivní tabuli?

Souhlasím   1   2   3   4   5   Nesouhlasím

2. Baví tě práce s interaktivní tabulí?

Souhlasím   1   2   3   4   5   Nesouhlasím

3. Je struktura hodiny logičtější a přehlednější, když používáte IT?

Souhlasím   1   2   3   4   5   Nesouhlasím

4. Pomáhá ti užívání IT v hodinách, abys lépe chápal/a gramatiku?

Souhlasím   1   2   3   4   5   Nesouhlasím

5. Pomáhá ti užívání IT v hodinách, abys lépe chápal/a význam slovíček?

Souhlasím   1   2   3   4   5   Nesouhlasím

6. Co se ti líbí a nelíbí na hodinách, ve kterých pracujete s interaktivní tabulí? Napiš prosím alespoň dvě věci, které se ti líbí a dvě věci, které se ti nelíbí

Líbí se mi: ……
……

Nelíbí se mi: ………
……

7. Uveď ještě prosím pohlaví: muž / žena

Děkuji za tvůj čas a pozornost.

Appendix 14

Evaluation criteria for teaching with IWB and for analysis and presentation (modified after Klement, M. et al[175] and Moss, G. et al[176])

| Teaching with the IWB				
Is the teacher digitally literate?	yes		no	
Can the teacher operate the board without problems?	yes		no	
Are the pupils digitally literate?	yes		no	
Do they know how to operate the board, from where to operate the board?	yes		no	
Do they enjoy going to the board?	yes		no	
What type of classroom management was used during the lesson?	group work	pair work	individual work	whole class teaching
What was used on IWB in the lesson?	IWB software	on-line materials	downloaded materials	other computer applications
Value analysis of materials created in IWB software for English lessons				
Materials used in the lesson	HOME-MADE (own materials)	HOME-MADE (shared materials)	professionally-made materials	
1. Content and structure of the presentation				
Age of targeted pupils				
What is the topic of the lesson?				
Content Analysis of activities from the point of view of language systems and language skills				
Does it practise language skills?	yes		no	
Does it practise language as a system?	yes		no	
Is the subject matter adequate to pupils' knowledge?	yes		no	
The length of the prepared material				
How much time approximately is needed to present this material?	less than 10 minutes	10-20 minutes	20-30 minutes	30 minutes and more
Structure of the presentation				
Is it logically structured?	yes		no	
Accuracy, typing errors				
Is the text accurate?	yes		no	
Are there any typing errors?	yes		no	
Activity explanation for teachers				
Are there any explanations of the activities?	yes		no	

[175] KLEMENT, M. et al, 2010, s. 326-335.

[176] MOSS, G. et al, 2007, s. 13-15.

2. Presentation layout				
Font				
What type of font is used?				
What is the size of the font?				
Choice of colours				
Are contrasting colours used for the font and the page background?				
Amount of the text on a screen				
Is the amount of verbal input appropriate? (7-9 lines max)				
Pictures and animations				
Are there any pictures?				
Is there any animation?				
3. Functional elements				
Interactivity of the presentation				
Are there any interactive elements used?	yes		no	
Which facilities of IWB software are used?				
text tool	yes		no	
turning	yes		no	
flipping	yes		no	
highlighting tool	yes		no	
pen tool	yes		no	
shape tool	yes		no	
grouping	yes		no	
line tool	yes		no	
inserting pictures	yes		no	
cloning objects, duplicating	yes		no	
drag and drop	yes		no	
layers	yes		no	
locking	yes		no	
hyperlinks	yes		no	
screen shades	yes		no	
full screen mode	yes		no	
page record	yes		no	
screen capture/clipping/ camera	yes		no	
another	yes		no	

Appendix 15

Sample page from the first presentation Making questions in present continuous

Appendix 16

Sample page from the second presentation Present tenses

Appendix 17

Sample page from the third presentation Project 2 U2 - vocabulary
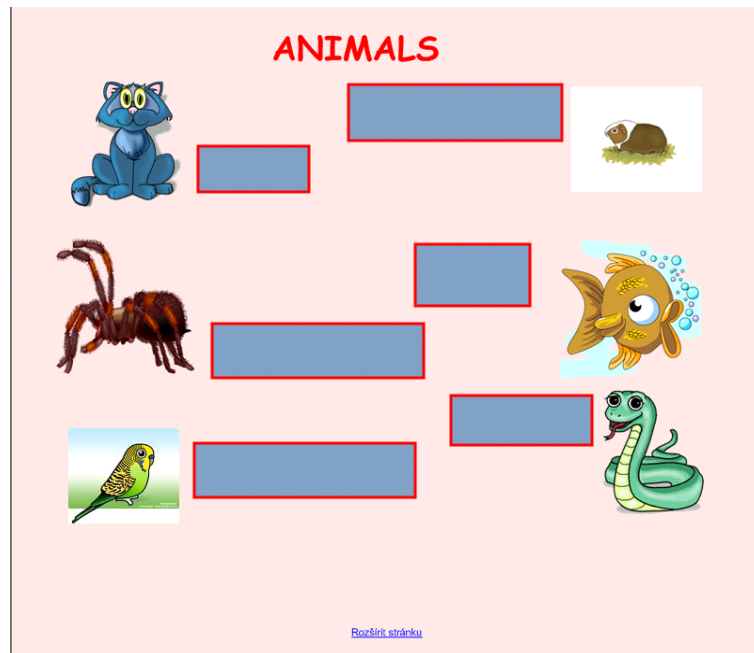
Appendix 18

Sample page from the fourth presentation Ordinal numbers

Appendix 19

Sample page from the fifth presentation Present continuous- revision

RESUMÉ

Cílem této diplomové práce je zkoumat využívání moderní technologií, konkrétně interaktivních tabulí, ve výuce cizího jazyka. V posledních letech dochází k nárůstu počtu těchto vyučovacích pomůcek na českých základních a středních školách. Postupně se stávají součástí každodenní výuky v různých předmětech.

Mnohdy se však stává, že interaktivní tabule není využívána. Jedním z důvodů může být právě to, že tabule jsou v našem prostředí novinkou. Není přesně stanoveno, jak by se s ní mělo učit, v čem je přínosná pro žáky, učitele a jejich přípravu. Smyslem teoretické části tedy je seznámení se s interaktivními tabulemi, druhy školení a základními principy práce s tabulí. Protože tato pomůcka přináší učitelům další možnosti do výuky, jsou zde jmenovány materiály, které mohou být využity při práci s interaktivní tabulí. Software k jednotlivým druhům tabulí nabízí učiteli možnost vytvořit si vlastní materiály, a proto by neměly být opomenuty hlavní dovednostmi těchto programů. Závěr teoretické části je věnován výhodám a nevýhodám, které přináší práce s interaktivními tabulemi.

Praktická část se tedy zaměřuje na důvody, které vedou k tomu, že učitelé angličtiny tyto drahé pomůcky nevyužívají. Předpokládané vlivy jsou dostupnost tabulí, délka praxe učitelů, jejich digitální kompetence, druh a délka školení. Učitelé angličtiny byli požádáni, aby se vyjádřili k tomu, jaký přínos má tabule pro jejich výuku a co jsou naopak její slabé stránky.

Názory žáků byly také zjišťovány. Ti se vyjadřovali k přínosu interaktivních tabulí pro jejich učení. V druhé části analýzy jsou srovnány představy učitelů o oblibě interaktivních tabulí u žáků se skutečnými názory žáků.

Závěrečná část se věnuje kvalitě materiálů, které jsou vytvářené samotnými učiteli a sdílené na internetu. Prezentace určené ke sdílení by se měly řídit nepsanými pravidly, které však velmi ovlivňují jejich správné použití.

ANOTACE

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Rok obhajoby:	2012

Název práce:	Using interactive whiteboards in teaching English
Název v angličtině:	Using interactive whiteboards in teaching English
Anotace práce:	Tato diplomová práce pojednává o zapojení interaktivních tabulí do výuky, obzvláště v hodinách anglického jazyka. Předpokládá se, že tato moderní technologie zlepšuje podmínky pro výuku. Práce si klade za cíl zjistit, zda učitelé v hodinách angličtiny s tabulí skutečně pracují, případně jaké důvody by mohly vést k jejich nedostatečnému využívání. Pozornost je zaměřena také na názory učitelů angličtiny a žáků na interaktivní tabule a na využívání plného potenciálu těchto tabulí a jejich softwaru.
Klíčová slova:	Interactive whiteboards, IWBs, using full potential of IWBs in teaching and learning, IWB software, resources for interactive whiteboards, training in IWBs, advantages and disadvantages of IWBs
Anotace v angličtině:	This diploma thesis studies usage of interactive whiteboards in teaching English. The learning environment should be improved by this device. However, the question is whether English teachers really have possibilities to use interactive whiteboards. The conditions for their use are studied in this thesis. The aim is also to provide the reader with overall impression interactive whiteboards give when used in English lesson and illustrate how the full potential of IWBs and their accompanying software can be used.
Klíčová slova v angličtině:	Interactive whiteboards, IWBs, using full potential of IWBs in teaching and learning, IWB software, resources for interactive whiteboards, training in IWBs, advantages and disadvantages of IWBs
Přílohy vázané v práci:	32 stran
Rozsah práce:	Celkový rozsah práce 112 stran, text 115 860 znaků (64 normostran)
Jazyk práce:	Anglický