USER TESTING OF LANGUAGE EDUCATIONAL PORTALS

Miloslava Černá, Petra Poulová

Motto:
User's aspect is one of the key factors of a successful portal
(Jafari 2003)

Introduction

A large number of websites focused on language education have come into existence during the last decades. This matter of fact can be illustrated by the number of links which get displayed when the expression "language portal" is written into the search box of the two most frequently used search engines Google and Yahoo. On 4th February 2009 Google brought 26,000,000 references and Yahoo even 292,000,000 references to the inquired expression. These figures are illustrative, it is clear that not each link can lead to the full scope educational portal. Language portals offer specific services beside standard set of services.

Those who are interested in learning/teaching languages can, beside the standard language educational process, take advantage of language portals where they can practise, enlarge and improve their language competences via a wide scale of various web applications ranging from correspondence tasks, sending news to an e-mail or a mobile phone, on-line communication to the intensive and systematic kind of education in e-courses. [7], [6], [21], [3] .

1 Portal Solutions and Customer's Aspect

Portal technologies are going through time of upheaval in their development. Exponential increases in information and sources on the web require sophisticated portal solutions. Elaborated portal solutions which are technologically advanced are essential pre-requisites for a website success, but it is always necessary to keep in mind the key aspect of website success which is the customer's aspect.

Implemented technologies have to be focused on the user; they have to be able to attract, address, get and keep the on-line customers. Easy navigation and movement on websites are primarily most important for users. If a portal is to succeed with users, it has to saturate their needs and expectations and provide them with a clear navigation system.

The issue of portals might be introduced with a statement that portals are not created intentionally. Initially "just" websites are designed which can become portals commensurate with their success confirmed by frequency of visits, interest in placing advertisements and ability to meet competition with other websites. That is a commercial success, which is a key element, which decides whether given portal survives or not [10]. For all customer portals B2C (business to customer) high rate of visits and advertisements is essential. Portal definition given by Utah University presents a portal as "supersites" that means as websites which have to be exceptional by rate of visits and offered services [23].

The portal issue can be discussed from various points of view: historical development, changes in conception and design, implemented applications or running processes. Beside the above mentioned views, portals can be also explored from *the user's point of view where web usability and user satisfaction with given portals are of key importance.*

Articles dealing with the portal topic sometimes start in a rather vague way, for example by a trivial statement that portals are an only fashionable phenomenon [12] or that portals represent for most people just data storage facility, place on the web with set right information and specific functions [20]. If the author provides readers with his/her definition of portals, the definition

is generally modified so as it would correspond with a professional specialisation of the scientific publication.

Roles in a portal, dynamic applications and authorised access into a portal are repeatedly emphasized as characteristics of key importance in an extensive book on internet portals designed for educational institutions [10].

Jafari's definition of the internet portal is following:

„*Dynamic web environment based on roles and specifically modified to fit selected groups of users of a given institution is known as the Internet portal*". [10]

A portal definition placed on sites of Utah University [23] is wider and is not focused entirely on processes running in portals as it was in the previous case. The definition of Utah University is close to the definition which can be found in the technical Explanatory Dictionary of the Internet [24], where categories such as provided web services, dynamics and significance for users are highlighted.

„*In simple terms, a portal is a web „supersite" with a collection of links to popular web services on the Internet, a kind of „doorway into the Internet". The site provides a variety of services including directories, online shopping, discussion groups, Web searching, channels (small windows within a page that are dynamically updated and determined by the user) and links to other sites.*" [23]

1.1 Key Characteristics of a Successful Portal

There are plenty of prerequisites leading to a success of a newly created portal but according to Collins [2] there are two main characteristics:
- dynamically created content,
- relevant content in respect to time and accuracy.

When we write an address of a selected portal a website offering dynamically created content should get displayed. Data and information are stored and managed in their data source and in accordance with user's configuration of their demands the portal object will get connected to the data source, find required information, convey content to the client and display the asked information to the user.

The other prerequisite of a successful portal relates to the characteristics of information which is conveyed to the user; content of the information should be relevant, accurate and up-to-date.

1.2 Standard Portal Services

Beside standard *asynchronous tools enabling communication and cooperation* which are traditionally represented by *e-mail* and *discussion forums* of virtual groups a portal should comprise *tools for direct online communication and localisation of individual members or groups*, for example, Instant Messenger, ICQ or Skype.

From the point of view of *personalisation* and *customisation* following portal options should be obvious after authorisation: *adding RSS and setting filter of automatic receiving of news* or abolishing these services according to user's interest. Possibility to set up authorities to share and view sources within given environment including personal information, discussions and files rank among other standard options. Monitoring and adaptation of a portal interface is not an exceptional matter at present; it has become quite common that users can adapt a colour of a portal interface, set font size or chose areas of interest in selected sections on a website [1].

Portals should also comprise *tools for process synchronisation and coordination support of various groups of users* (for example teachers and students, customer centre and customers, etc.)

Personalisation and customisation are expressions which can be found in most of technical articles and papers on current portal solutions. Definitions of these expressions vary or inosculate [8].

Customisation and Personalisation are completely interchangeable expressions in the Explanatory Internet Dictionary [24].

Nielsen in his article Personalization is Over--Rated states his own definition:

„*Customization is under direct user control: the user explicitly selects between certain options*

Personalization is driven by the computer which tries to serve up individualized pages to the user based on some form of model of that user's needs." [17]

In simple terms customisation stems from a user; the user selects options. When it comes to personalisation it stems from a computer itself.

On the contrary, on-line encyclopaedia Tech target does not work with an expression customisation it only provides a definition of the expression personalisation which fully corresponds with a previous definition where marketing power of a described feature is being highlighted.

„On a Web site, personalization is the process of tailoring pages to individual users' characteristics or preferences. Commonly used to enhance customer service or e-commerce sales, personalization is sometimes referred to as one-to-one marketing, because the enterprise's Web page is tailored to specifically target each individual consumer. [22]

The issue is so confusing that in a common user's environment the expression customisation is dropped and all web adaptations are incorporated into the expression personalisation. In Czech portal environments we can meet quite simplified name – services which comprises both discussed expressions. In a new portal iDnes.cz it is possible to find among services elements belonging to the customisation category: WAP/PDA news to e-mail or mobile, RSS or setting the portal as a homepage. The similar situation is in case of the most widely visited general portal Seznam where expressions like personalisation and customisation are not used but these characteristics can be found there, for example, at a bottom bar in a section of user's options: Add content, Change view, Set Seznam as a home page.

A foreign news portal Deutsche Welle doesn't use words like personalization and customisation, as well. But it offers its visitors categories which play the same role and calls them Interactive web services: DW Sceensaver, Social Bookmarking, RSS Feeds, Integrated Search, Newletters, Podcasting, Reader Response, Mobile, etc.

2 Language Educational Portals Usability Study

If a portal is to be successful with customers it has to meet a lot of criteria including the essential needs and demands of potential users. Usability testing of individual portal solutions is a tool introduced for investigation of user's aspect.

Most users perceive a portal as a common website and not as a sophisticated machine constructed on complicated cohesive processes. Common user doesn't have to think whether s/he is browsing through a portal or websites. First and foremost a common user perceives and evaluates good navigation and functional services which are offered. Web pages have to be intuitive, intelligible and self-explanatory if a user is to return to the portal [11].

Research on portal usability is built on empiric observation of ways how common users under common circumstances browse through web pages.

„Usability means that something works properly, that even a person with average (even bellow average) abilities and experience is able to use some thing ..." [11]

According to Nielsen [14] usability is a quality characteristics which assesses simplicity or complexity of use of the user's interface. Usability is specified by five key attributes which relate to:
- Facility to accomplish tasks by a user
- Speed of task accomplishment
- Memorability of the web environment; how users manage their move on websites when they return to them after some time
- Rate of mistakes and their significance
- Satisfaction with websites

Beside *usability* it is necessary to mention an attribute which relates to design's functionality which is *utility*; utility answers whether websites correspond with user needs. Usability and utility are equally important:

"*It matters little that something is easy if it's not what you want.*

It's also no good if the system can hypothetically do what you want, but you can't make it happen because the user interface is too difficult". [14]

2.1 Factors Influencing User's Behaviour

When websites are analysed from a user's perspective one of the first researched areas is the area which focuses on *intuitiveness*. It has to be clear to users at first glance what the websites are about and how to use them and how browse them. Use of complicated expressions or terms seems rather questionable; they are used in effort to present themselves as highly technical or as a spice in effort to attract visitors by originality. Unclear links or buttons (where users do not know whether they are active or not, whether

they are just a smart decoration) slow down the process of user's orientation and search on sites. Unfortunately it is a quite common problem with language portals.

The portal visitor has to know all the time where s/he is, where to start and what the most important thing on the site is. There are not many users searching for some information who have so much time that they could afford to victimize it for an uncertain result; whether the relevant information will be found or not. Portal designers should constantly have in mind that there is also strong competition in this field and that users have the option of choice.

Time is another significant factor influencing user's choice. If a visitor feels that s/he is wasting time with some activity, s/he will not do it any more and will not return to these sites. Tightly linked to this fact is another key area of usability research which is connected with user's satisfaction with a portal.

When users look for information they don't make an optimal selection but they make compromises, they mostly choose the first suitable option. A hybrid expression "satisficing" (mixture of satisfying and sufficing) has been introduced by Krug to name this technique [11].

General true is that websites are not read, they are just browsed, and only relevant pieces of news are searched for because there is just a little time [18]. Websites are designed to be browsed and not to be read; the issue of *conventions* is narrowly linked to that fact.

Successful websites as well as a successful portal have to keep a visual hierarchy. Users have to recognize which parts on a site are linked to each other and in what relation they are. Utilization of introduced techniques and well proven ways and ideas generally called conventions ranks among essential criteria of successful sites. Conventions are useful; they save users because they do not have to find out how things work.

Advertisements on web can cause various problems from user's perspective:
• There are too many advertisements on the web which quite often present themselves as further sources.
• Advertisements are placed in the most lucrative place on the main page. But this home page of a particular portal should be the main information site defining object and content of the portal.
• Due to advertisements the home page is violated and main content may be distorted which is for a time-limited user who is not longing for a search trip rather discouraging moment.

Another substantial discouraging moment for users is the effort to dig as much as possible *personal information* from them. If a system asks for registration without giving a user chance to browse a few pages so as s/he could get an idea on potential benefits, this portal will be left by most of visitors because it is a typical example of a wrong discouraging method. Users are not willing to leave their e-mail addresses, write down professional specialisation, hobbies, etc. when they do not know whether the portal environment will suit them or not.

Both advertisement and personal information are rather problematic and questionable issues moreover they are very often an inseparable part of portal solutions and language portals are no exception.

If a user-customer is to browse offered sites and return to them more or less regularly, the content of these sites has to be worked out and accessed in a relevant way. Graphic design of web sites determines the impression on the user and represents a significant motivation factor for a potential customer. Simplicity and easy navigation are key factors of website design [5].

Jakob Nielsen divides users entering web into two groups [19]. Users trying to find needed information can either use a search box on the site (if this service is here) or they can search via references. If websites are designed in a transparent way users move by means of references. On the main page in the main menu, in the list of sections they choose the reference which is at that moment the most relevant. Users can get this way in the website hierarchy to lower to the more specific level. A problem is that in case of robust portals it is quite demanding to recognize when to stop the unsuccessful search, at which moment to stop wasting time and try another way.

So navigation plays a few fundamental roles. Firstly it has to constantly inform users on their position on the web and above all to help them to find required information. Placing navigation signs and their design are predominantly given

by introduced conventions. If navigation signs for browsing the web are of standard design and on standard places they can save users time and energy. Among basic navigation signs rank logo, section, subsection and tools.

Logo is a symbol of sites and is placed as a top level in the portal hierarchy. Sections and subsections followed by site and items on the site form other layers of a portal architecture.

Sections as main portal content areas represent a primary navigation [11]. Names of sections should be the same anywhere in the portal, modified names of the sections or even completely different ones which can seem logical to the designer are for users misleading and confusing.

Special position in navigation is given to tools. Portals are equipped by a wide range of tools, but in accordance with the portal specialisation the set of tools differs accordingly. Tools can be categorized according to the purpose they were implemented for. Generally they are divided into tools which help users to use the portal (help, map of the server, shopping basket) and tools which bring information on the operator (about server, about us, contact). Among other common tools rank: discussion or forum, my pages, regis-*tration, search, news and dictionary*. Tools are not considered to be a part of a navigation hierarchy.

If web navigation is suitably conceived and individual sites are well designed, each user should be able to answer following questions [11]:
• What kind of portal is that? (Logo)
• What site are you on? (The name of the site)
• What are main sections of the portal (Sections)
• What options do you have at this layer? (Local navigation)
• Where are you in the portal hierarchy? (Signs "you are here")
• How can you search for information?

2.2 User Testing of Web Sites

It is not possible to define a universal user. Theoretical concepts of how various mechanisms work and how users act rather differ from reality.

Two kinds of testing are generally run when web applications are tested by a user: group tests and usability tests commensurate with attraction of the web or functionality of the web are examined.

To find out customers' likes and needs *group tests* are run. By means of group tests it is possible to find out whether the idea of a web server makes sense, whether the offer is attractive or whether names of functions of operating elements are intelligible. Group tests are suitable for collecting users' opinions on a particular web feature. Group tests do not examine functionality of the whole web they do not claim to improve it. This kind of test is run in the form of discussion in which group of five to seven participants responds to stimuli and suggestions which are proposed to them.

When it comes to usability tests, they are run in a different way; web server, prototype of the server or just separate websites are presented to individual evaluators. The evaluator is to find out the main objective of the web portal, value of offered functions and a way of portal organization, etc. The other part of the evaluator's assignment is to solve out a set of tasks or at least to try to solve them.

A number of authors incline to running tests only with three or four users for each round of tests. They as a rule stem from a study of Jacob Nielsen and Tom Landauer Why You Only Need to Test With 5 Users. The study claims that the number of usability problems found in a usability test with **n** users is:

$$N(1-(1-L)^n) \qquad (1)$$

Where N   is the total number of usability problems in the tested web and

L   is the proportion of usability problems discovered while testing a single user. The value of L has settled at 31%.

All 100% of the usability problems in design can be found out by 15 users. Only five users can discover astonishing 85% problems which provide sufficient information and detailed insight into the researched websites. [16]

Running tests with more users is suitable when there are distinctively different groups of users or when we can expect completely different behaviour of these users [16].

Testing can be run in various types of modified rooms (see [9]). It is not necessary to use a specially equipped laboratory with electronic monitoring and recording systems. Testing is often run in meeting rooms or offices with a computer and an ac-

cess to the Internet, the only necessity is to close the door so as the user was not disturbed [16].

3 Running Own Usability Testing of Selected Language Portals

Ten language portals have been selected in several rounds for a usability study of language portals:
- Angličtina.com
- Angličtina na Internetu
- Dictionary.com
- E-academy.cz
- E-academy.sk
- English - test.net
- Merriam-Webster OnLine
- Onestopenglish
- The Free Dictionary
- Tutor.cz

Selection of a set of source portals was done within repetitive thematic discussions at formal meetings at technical trainings, conferences and seminars as well as at less formal meetings at the faculty, institutions or companies where language classes took place. Over thirty experts on language education and over seventy students participated in specialised professional interviews and discussions. The only essential connecting link among all participants was their interest both professional and non-professional in electronic language materials on the Internet.

Over two hundred language portals were searched by the authors. Forty language portals were analyzed during thematic discussions and interviews. The final short-list of portals came out of these discussions and interviews.

Selection of portals was based on:
- Theoretical preparation of the authors
- Practical experience of individual participants. A subjective aspect played a distinctive role; especially satisfaction with a portal solution or custom to use it.

In order to be as objective as possible the following criteria about the selection of language portals were taken into consideration:
- Width of portal services
- Variety of portals in terms of sphere of action and content specialization
- Optimalization in search on the Internet

Each of ten language portals was tested by five or six users. Among users there were always representatives of three groups:
- English language teacher
- Full-time student
- Student of life-long education

During usability testing each user (evaluator) not only completed the tasks but also filled in the form *Usability testing of language portals*. The research room was an office with a computer and the access to the Internet. There were only two people in the room: user – evaluator and investigator of the Language portal study conducting the usability tests. The most important piece of information was informing users that web portal is not testing them and their computer literacy. They were assured that they cannot fail; if they do not accomplish some task it is not their fault. Some tasks even could not be solved but users were not warned that they were unsolvable. It was completely up to the user to consider situation; to consider how much time s/he is going to sacrifice to the task accomplishment. If the portal was interesting and beneficial to users running usability tests, they didn't mind spending extra time on searching information or fulfilling given tasks which they found of special importance.

It is quite common that portals are not transparent which was proved by usability testing of language portals, as well. If a user got lost s/he did not waste time on accomplishing tasks, they just left the chaotic sites. If a portal is designed in a comprehensive and transparent way, users soon find out whether searched item is there or not and do not waste time with a useless search.

As for time spent on accomplishing tasks, users were not limited at all, they only recorded time on fulfilling particular tasks. Whether they accomplished the task or not was not important at that stage.

For further analysis tasks were divided into two main categories:
- Unsolvable task
- Solvable task with subcategories:
  - Accomplished
  - Failed.

Just the task where user was able to show the way to the task solution by copying the web-address into the appropriate box in the form was

considered to be an accomplished task. Various ways leading to task solutions by various users came down at the stage of final evaluation of usability testing.

General view of a portal and its functions was the first researched area in the usability test. Following two questions dealt with this issue
• What is the main mission of the portal?
• What services does the portal offer?

Users were given no help; they were to respond in a spontaneous way. The objective of this part was to find out whether users are able at first sight recognize what kind of portal is being tested. *(Note: At a pilot stage users were given as a help an offer of options but proposed answers largely influenced them)*.

The second part of usability testing of language portals consisted of a set of concrete tasks surveying user's move in the portal. The first four tasks were designed as interactive and corresponded to possibilities of portal personalisation and customization:
• To get registered
• To get enrolled into the e-course
• To add RSS channel
• To apply for sending news

The rest of tasks, except the last one, were specialised; they reflected specialised language portal orientation:
• To find a language school where an exam of language competences of the level B2 can be done (according to European Reference Frame).

Selection of this specific task corresponds to the geopolitical position of our country. Due to the fact that we belong to the European Union, necessity of certification of language competences is evident and inevitable. Information on language examinations of various levels is highly desirable and should be placed in language portals.
• To find free study materials (free e-lessons, free grammar exercises, etc.)

Language portal is a place where most visitors expect to find heaps of study materials on developing various language competences (reading, enlarging vocabulary, practicing grammar, etc). If this issue is missing it means a significant decrease in value of the language portal.
• To order a language textbook Headway - intermediate language level

Tab. 1: Time spent on doing individual tasks in the Onestopenglish portal.

Onestopenglish	Solvable task		Unsolvable
5 users, 6 solvable tasks	accomplished	failed	
To get registered	6	3	0
To get enrolled to an e-course	0	0	12
To add RSS channel	19	5	0
To ask for sending news	10,5	0	0
To find a language school	0	0	13
To find a study material	4	0	0
To order a Headway textbook	0	0	14,5
To find an expression in a dictionary	0	0	16,5
To find an audio text	5,5	0	0
To find a contact	5	2	0
Total time	**50 min**	**10 min**	**56 min**

Source: own.

Headway textbooks have been used in most language schools as well as secondary schools in the Czech Republic for a decade. It is quite natural that potential users – customers will search a link in the language portal where they could buy the textbook.

• To find an expression in a dictionary (for example "collateral").

A dictionary belongs to standard services of language portals. More demanding expression for translation was chosen intentionally. During usability testing is revealed not only presence or absence of this service but also level of its quality.

• To find an audio text
Work with an audio text is an attractive and welcome enlargement of possibilities to practise language competences, in this case listening skills.

• To find a contact
Possibility to find a contact person belongs to standard facilities of most portals. Finding a contact person enables users to get involved in a portal run in an interactive way, to respond to stimuli and get feedback.

When users finished the stage of solving tasks they got a deeper insight into the tested portal, at that moment users were asked to fulfil the same two questions which were in the first part of testing (what is the mission and functions of the portal).
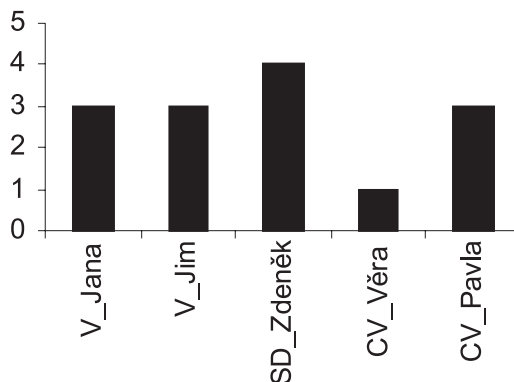
The final part of usability testing was focused on user satisfaction with an analysed portal; whe-

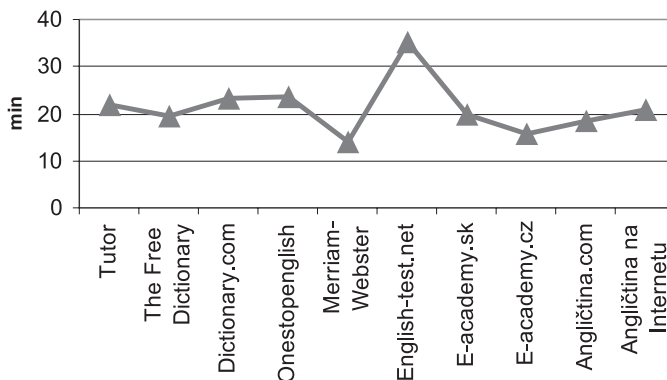Fig. 1: Rate of users' success in solvable tasks in the Onestopenglish portal

13%

87%

☐ Accomplished
■ Failed
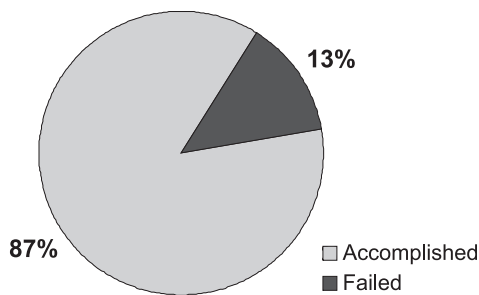
Source: own.

Fig. 2: Rate of satisfaction with the Onestopenglish portal

Source: own.

Fig. 3: Average time spent by a user in the portal

Source: own.

ther users could move easily in the portal environment, whether they liked the graphic design and whether they were going to return to that portal. Satisfaction with the portal was expressed both in words as well as in a quantitative way on a satisfaction scale going from -5 points to +5 points, 0 represented a neutral attitude.

Overall tabs (see tab. 1) were created for keeping all data of elaborated results gained from the forms which had been completed by users testing language portals. Total time which was spent by users on a given task was recorded in a particular cell of the tab. 1.

The data were consequently quantitatively processed; special focus was given on evaluation of the rate of successfully solved tasks including time aspect and satisfaction assessment.

Collected data were worked out in a graphic way. Graph 1, for example, illustrates the rate of users' success when doing solvable tasks in the portal Onestopenglish. In this portal five users were successful in six solvable tasks twenty-six times out of thirty.

The rate of satisfaction was worked out into a graph for each portal. Graph 2 shows that the rate of satisfaction with the Onestopenglish portal solution is comparable and quite high except one user. The interesting thing is that users were discouraged neither by unsolvable tasks nor by time burden. (Values on the axis "y" represent rate of satisfaction on the scale -5 to +5 chosen by individual users).

Written evaluations of all users of the portal solution were analysed, as well. High user satisfaction arises from a width of portal facilities and from the fact that plenty of services or options provided by this portal correspond to a wide extent with concrete specialised needs of users. The following features were positively assessed:
• Navigation,
• Division of the content into several roles
• Option to print study material.

The general report on the Onestopenglish portal might be concluded by two sober quotations written by surprisingly highly satisfied users:

"*Graphic doesn't offend nor impresses*" (Student of life-long studies)

"*Boring but comprehensive*" (Teacher)

One of the objectives of usability testing was to *follow what time burden solving of assigned tasks in selected portals represented for users*. As it has already been mentioned above, all user's move in the portal, their work on solvable and unsolvable tasks including time spent on their completion were during the whole usability testing monitored and recorded in a systematic way.

Graph 3 illustrates average time spent by each user in each tested portal.

It can be clearly seen that English-test.net portal was time most demanding, the shortest time users spent in the Merriam Webster OnLine portal which was followed by Eacademy.cz. As for the other portals no distinctive differences can be seen in this time category.

Plain quantitative data themselves without qualitative comment show only length of stay in

the portal but give no information on functionality of the portal or on satisfaction with it. A long time in the portal can indicate a bad navigation in the portal but on the other side it can also predicate of an interest in this portal. So it was naturally necessary to add a qualitative evaluation into the final report on usability testing and to add other

solution because the desired functionality is not implemented into the portal.

But graph 4 shows completely different findings. Users spent in most cases more time on completion unsolvable tasks, only portals *Tutor and Angličtina na Internetu* reach comparable values in both researched categories.

Fig. 4: Average time spent by a user on completion of one task
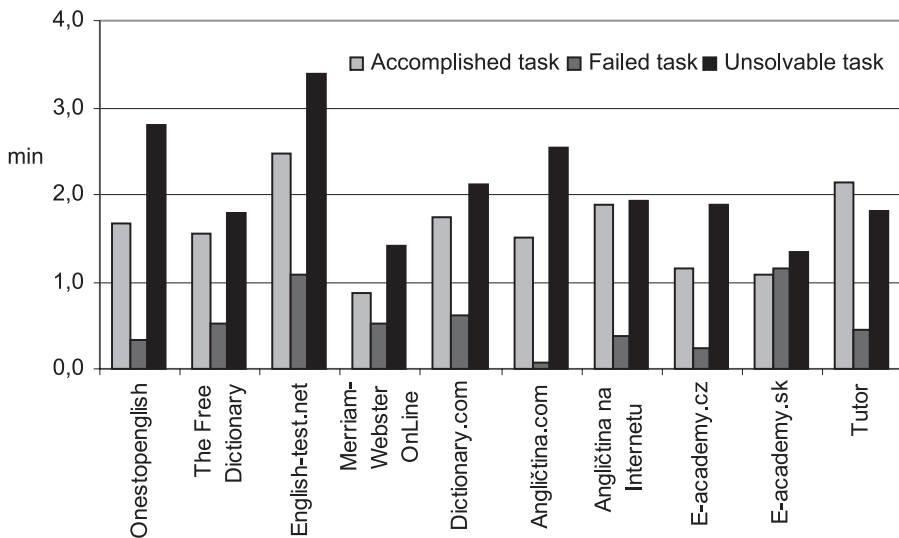
Source: own.

quantitative characteristics like time spent on individual solvable and unsolvable tasks. One of the sources for following evaluation was the graph 4 showing average time spent by a user on completion of one solvable and unsolvable task. This characteristic bears evident value clearly showing functionality of the portal.

Rate of time burden indicates navigation and portal functionality. The more time a user spends on completing a solvable task or on searching for solution of an unsolvable task the more evident signal it is that there are mistakes in websites design. It might be assumed that users will spend more time on solvable tasks because firstly they have to locate them in the portal and then they can move to the next step and solve them. Unsolvable tasks shouldn't be so much time consuming. In a correctly designed portal a user is supposed to find out soon that the task has no

Users spent least time in unsolvable tasks in portals *Merriam Webster OnLine and E-academy.sk*; reasons for such a short time in them were incomparably different.

It is not possible to make conclusions exclusively just on the basis of quantitative results. Qualitative assessment examines reasons for user behaviour, rate of time burden is only one of indicators, nevertheless important from user's perspective, showing whether the portal is designed correctly or incorrectly. As an example, *an E-academy.sk* portal can be showed which was completely unsuccessful with users. Users spent relatively little time in followed "accomplished solvable tasks" and "unsolvable tasks" categories but in the category of "failed solvable tasks" they got stuck for the longest time of all portals. The fact that users spent such little time on unsolvable tasks was not a good functional *E-academy.sk*

portal solution but users´ unwillingness to stay in this portal any longer which got revealed by means of qualitative assessment.

On the other hand a *Merriam Webster OnLine portal* was very well designed, it was transparent with a good navigation system so users spent little time on both solvable and unsolvable tasks.

Another research area was to find out to what extent users' success in accomplishing tasks corresponds with users' satisfaction with the tested portal.

Users´ success belongs among main criteria of portal functionality. *E-academy.sk.* portal achieved the worst results in the surveyed sample of portals as can be seen in the graph 5. This portal can be characterised by the lowest rate of success and satisfaction. In case of three portals rate of success fully corresponds with the rate of satisfaction; *Onestopenglish, The Free Dictionary* and *Merriam Webster Online* show high rate of both success and satisfaction. When it comes to the rest of portals, connection between success in accomplishing tasks and users´ satisfaction is not evincible, for example, the rate of success in a Tutor portal reaches astonishing 84% but the rate of satisfaction is the second lowest.

Influence of a time burden when completing tasks on users' satisfaction and on defining of portal solution functionality was the last surveyed area. Portal functionality can be illustrated in graph 4.

- The higher left column shows average time spent on an accomplished task of a chosen portal, meaning the portal is more demanding for users. The higher the left column is the more confusing navigation and less effective functions are. This environment needs analysis of problematic applications and further modifications leading to improvement in functionality.
- The middle column illustrates time spent by users on solving tasks which are solvable but users did not succeed in. The lower middle column is the better.
- The lower right column shows average time spent by a user on an unsolvable task, meaning the portal is designed better. Navigation is well designed that is why a user doesn't spend time on searching for not existing applications. So again the lower the column is the better.

Graph 3 shows that there are not distinctive differences in time burden of users, only in case of the *English–test.net* portal users stayed notably longer which got reflected in a lower level of satisfaction in the assessment of this portal. The second portal with the highest time burden was *Tutor.cz* which was also the second worst portal from the satisfaction point of view. Dissatisfaction with the portal was not caused by the length of time spent in it; users disapproved of the general concept of the portal that focuses entirely on business.

Fig. 5: Comparison of the rate of users' success in accomplishing tasks and their satisfaction with particular portal solutions
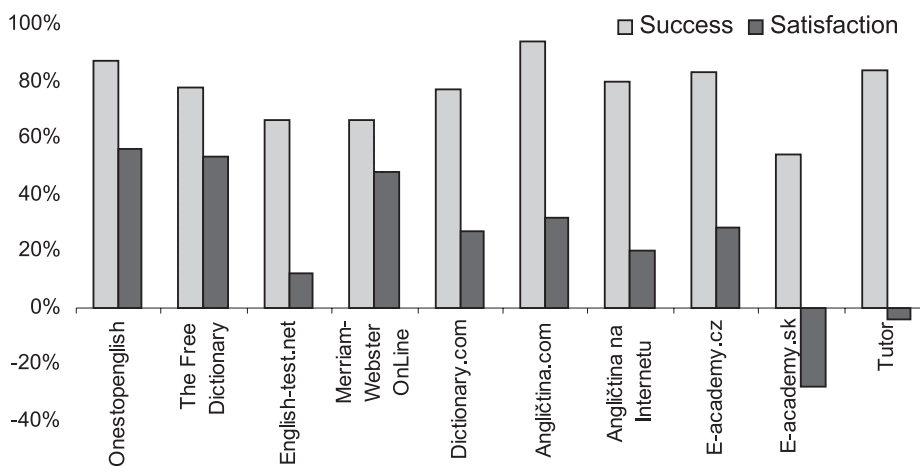
Source: own.

Conclusion

Ten final reports were elaborated to ten selected portals within the study on usability testing. Selection of portals was based on the width and quality of their facilities.

Furthermore the gained findings can be used within research of current trends of portal solutions development which are:
- Integration and interactive trends
- Cooperation and social web support
- Accessibility and adaptability trends

A significant trend in portal development is the creation of "business intelligence" kind of portals. Current sophisticated portals represent a highly complicated system consisting of plenty of mutually connected processes. These processes are integrated in a way which enables them to work out a number of various operations while retaining wholeness. This *integration trend* approves oneself in language educational portals, as well.

Implementation of applications *supporting development of social webs* into language portals can be presumed together with the integration trend. In this case this is the question of enlargement of offered portal services in support of following tools like wiki, blog, social bookmarks in del.icio.us, Digg, Furl, MyYahoo!, which change the way how people discover and use the Internet. The named tools strengthen interactivity and enable users to share, store, select, evaluate, comment any link, websites, articles or blogs.

New generation portals reaffirm *features of cooperation and measurement of a community activity* in portals they use [13].

The third significant trend in the development of portal solutions is an old-new trend of *accessibility*. Potential of a portal can get expanded considerably if the aspect of accessibility is taken into consideration from the first moment of a portal design; the portal can be open to people with various mental or physical disability so it can address much wider scale of users.

References:
[1] BBC [online]. © Copyright 1999 – 2008 [cit. 2008-08-08.]. URL: <http://www.bbc.co.uk.cz/>.
[2] COLLINS, H. *The Enterprise Knowledge Portals: Next Generation Portal Solutions for Dynamic Information Access, Better Decision, and Maximum results*. 1st ed. New York: AMACOM, 2003. ISBN 0-8144-0708-0.
[3] ČERNÁ, M. Virtual Learning Space. In *Proceedings of the IADIS International Concference e-society, 2008,* pp. 604-606. ISBN 978–972–8924–55-3.
[4] ČERNÁ, M. *Jazykové vzdělávací portály*. Disertační práce. Univerzita Hradec Králové.
[5] ČERNÁ, M., MANĚNA, V. Webové stránky, sladění obsahu, grafického designu a navigace. In *Sborník příspěvků ze semináře a soutěže eLearning, 2007*. Hradec Králové: Gaudeamus, 2007, pp. 217-221. ISBN 978-80-7041-573-3.
[6] ČERNÁ, M., URBANOVÁ, L. Anglický jazyk pro školský management. In *Sborník příspěvků ze semináře a soutěže eLearning, 2005*. Hradec Králové: Gaudeamus, 2005, pp.53-58. ISBN 80-7041-595-9.
[7] FRANCŮ, M. *Výuka jazyků na internetu.* 2. vyd. Praha: Computer press, 2002. ISBN 80- 7226-654-3.
[8] GAO, Y. *Web Systems Design and Online Consumer Behavior* [online]. 2001. [cit. 2008-30-07]. URL: <http://books.google.cz/books?id=hUvC7LegipUC&pg=PA203&lpg=PA203&dq=web-srv.cs.fsu.edu/+baldauf/projects/&source=web&ots=Cfmsxh5JVZ&sig=1A67p-KyQb9G5n68YdUwxAzSDiQ&hl=cs&sa=X&oi=book_result&resnum=1&ct=result#PPR5,M1>. Idea Group Inc (IGI), 2004. ISBN 1591403286, 9781591403289.
[9] HUB M., VÍŠEK, O., VALENTA, Z.. Testování použitelnosti Webgis pomocí hodnotitelů. *E+M Ekonomie a Management*, 2007, roč. 10, č. 4, pp. 124 – 131. ISSN 1212-3609.
[10] JAFARI, A., SHEEHAN, M. *Designing Portals: Opportunities and Challenges Information*. Hershey: Idea Group Inc, 2003. ISBN 1-59140-10.
[11] KRUG, S. *Web design*. 1. vyd. Brno: Computer Press, 2003. ISBN 80-7226-892-9.
[12] LUSTIGOVÁ, Z. *Webovské portály obecně i konkrétně – Portál TELMAE – digitální knihovna* [online]. [cit. 2007-15-02]. URL: <http://telmae.karlov.mff.cuni.cz>.
[13] NIELSEN, J. *Enterprise Portals Are Popping* [online]. Jakob Nielsen's Alertbox, [cit. 2008-15-07]. URL: <http://www.useit.com/alertbox/portals.html>.
[14] NIELSEN, J. *Recruiting Test Participants for Usability Studies* [online]. Jakob Nielsen's Alertbox, [cit. 2007-12-07].URL: < http://www.useit.com/alertbox/20030120.html>.

[15] NIELSEN, J. *Usability 101: Introduction to Usability* [online]. Jakob Nielsen's Alertbox, [cit. 2007-12-07]. URL: < http://www.useit.com/ alertbox/20030825.html>.

[16] NIELSEN, J., LANDAUER, T. *Why You Only Need to Test With 5 Users* [online]. Jakob Nielsen´s Alerbox, [cit. 2007-05-07]. URL: <http://www.useit.com/alertbox/20000319.html>.

[17] NIELSEN, J. *Personalization is Over-Rated* [online]. Jakob Nielsen's Alertbox, [cit. 2008-23-07]. URL: <http://www.useit.com/alertbox/ 981004.html>.

[18] NIELSEN, J. *How Users Read on the Web* [on line]. Jakob Nielsen's Alertbox [cit. 2007-02-06]. URL: http://www.useit.com/alertbox/ 9710a.html

[19] NIELSEN, J. *Search and You May Find* [online]. Jakob Nielsen's Alertbox [cit. 2008-23-07]. URL: <http://www.useit.com/alertbox/ 9707b html>.

[20] PLACHÝ, P. Webové aplikace a portály, *IT Systems, 2007*, č. 3. ISSN 1802-615X.

[21] POULOVÁ, P., ŠRÁMKOVÁ, H., ČERNÁ M. Multimediální e-learningové jazykové kurzy v celoživotním vzdělávání. In *Zborník vedeckých prác.* Nitra: Slovenská polnohospodárska univerzita v Nitre, 2005, pp.115-121. ISBN 80-8069-307-2.

[22] PERSONALIZACE - ENCYKLOPEDIE – TECH TARGET. [online]. [cit. 2008-23-07]. URL: <http://searchcrm.techtarget.com/sDefinition/ 0,,sid11_gci532341,00.html>.[23] *What is a portal anyway?* [online]. The University of Utah. [cit. 2008-30-07]. URL:<www.acs.utah.edu/acs/ news/portals.html>.

[24] VITOVSKÝ, A. *Anglicko-český a česko-anglický výkladový slovník Internet*u. 1. vyd. Praha: Antonín Vitovský – AV software, 2004. ISBN 80-901428-7-7 .

Mgr. Miloslava Černá, Ph.D.
Univerzita Hradec Králové
Fakulta informatiky a managementu
Katedra aplikované lingvistiky
miloslava.cerna@uhk.cz

RNDr. Petra Poulová, Ph.D.
Univerzita Hradec Králové
Fakulta informatiky a managementu
Katedra informatiky a kvantitativních metod
petra.poulova@uhk.cz

ABSTRACT

USER TESTING OF LANGUAGE EDUCATIONAL PORTALS

Miloslava Černá, Petra Poulová

The contribution provides an insight into selected portal solutions with special focus on custo-mer´s aspect. The empirical usability study on language educational portals follows the standard structure; introduction, methodological frame, running own usability study and conclusion. The introduction sketches the width of the researched issue. The methodology frame provides readers with definitions and explanations of key expressions related to portal solutions; like portal, its servi-ces and characteristics where customization and personalization are described in detail. The other part of the methodological frame is devoted to usability testing in general terms. Usability testing of individual portal solutions is a tool introduced for investigation of user's aspect. Research on portal usability is built on empiric observation of ways how common users under common cir-cumstances browse through web pages. Factors influencing user´s behaviour like intuitiveness, satisfaction and conventions are highlighted due to their significant role in user´s move in the por-tal environment. The main part of the study is represented by own usability testing of selected lan-guage portals. Selection of portals was based on the width and quality of their facilities. A special form for usability testing of language portals was created. A set of tasks was developed reflecting both general and specialised areas of the tested portal. The tasks were divided into two main cate-gories; unsolvable tasks and solvable tasks with accomplished and failed subcategories. Ten final reports were elaborated to ten selected portals within the study on usability testing. Conclusion brings outline of further utilisation of gained findings within the research of current trends of portal solution development.

Key Words: *case-study, communication channel, internet, information, portal, portal services, usability testing.*

JEL Classification: *C42, I21, L86.*