

The design of effective online help in Web applications

Marie Christine Roy^a, Yves Rannou^b and Lucie Rivard^c

^aFaculty of Business

Université Laval, Québec, P.Q., G1K-7P4, Canada
Tel : 1-418-656-2131, Fax : 1-418-656-2624, E-mail : Marie-Christine.Roy@fsa.ulaval.ca

^bBlue Spark (An OnX Company)

183 Bathurst Street, Suite 302, Toronto, Ontario M5T 2R7
416-971-6612 ext. 116, Fax: 416-971-6549, E-mail: Yves.rannou@bluespark.com

^cGP3Consulting Group

3107, avenue des Hôtels, Sainte-Foy (Québec), G1W 4W, Canada
Tel : 1-418-780-8109, Fax : 1-418- 836-3744, E-mail : Lucie.rivard@gp3.qc.ca

ABSTRACT

The usability and ultimately the success of Web-based services are partly due to effective user support. Although the use of online support tools is now more prevalent in Web applications, these often overwhelm the user with information poorly organized, or are simply ignored. This paper proposes a guide for the appropriate choice and design of task support tools based on user profiles, tasks and characteristics of help tools.

Keywords

Online help, Web usability, Web design, Web training, Task support.

1.0 INTRODUCTION

An increasing number of applications are being developed on the Web, and their usability is considered as being critical for success (Donahue et al., 1999). One important aspect of Web application usability is its capacity to successfully support users while they are completing their tasks. The best way to support users is to provide task support tools that are embedded in the application. Very few guidelines have been proposed to help designers choose the appropriate tools based on users types, needs and tasks. The main purpose of this paper is to explore the different ways of supporting users electronically, the current trends in task support, and the effectiveness of the different tools available. It provides a guide that could be useful to anyone interested in developing online help to improve the usability of their Web applications.

2.0 WHAT IS ONLINE HELP?

User assistance generally encompasses anything that is made available to help users complete a task while using an application (Halsted, K., & Roberts, J. H., 2002; Leighton and McCabe, 2002; Bezanson, 1995). It is meant to enhance user performance through a user interface that anticipates needs and supports users conveniently and effectively (Benzanson, 1995).

In the past, user assistance on the Web has most often taken the form of online user manuals. Although they can be somewhat helpful if printed, binded and consulted in the same way paper manuals are, usability tests show that they are very ineffective (Grayling, T. 1998, & Spool, J.M., 1998). In more recent years, more sophisticated forms of online assistance are available, such as embedded and contextual help, search engines, wizards, videos, audio, etc.

3.0 WHAT ARE THE OBJECTIVES OF ONLINE HELP?

Web applications are more and more prevalent because they provide effective and cost efficient services to customers, government citizens and employees. In most of these services, well designed online support systems will serve the following objectives:

- 1- They reduce the need for human support: The support or help desk personnel typically spend most of its time solving common problems people have when using online; applications. When the appropriate support tools are integrated in the application, these personnel can spend more time focusing on complex and rare problems;
- 2- They increase the user's autonomy to find relevant information and execute a task: Typically, Web

application users do not have easy access to human support resources and will need to rely on their own abilities to be able to execute their tasks;

3-They encourage the use of online services: Although many services are now offered online, they are still used by a small proportion of people, mainly because of their complexity; Online support should reduce this complexity and encourage more widespread use;

4-They train in context and just in time (through push or pull support functions): For most Web application, formal training sessions are unfeasible or undesirable. The most effective way to ensure learning is to provide training and task information at the time it is needed;

5- They can provide constant support for the users in more humane, interactive, personalized and attractive way;

6- And, they can reduce information overload. When online support is focused only on the information required in a specific context and time frame, the user does not have to memorize all the information provided in traditional user guides or application training sessions.

4.0 WHAT ARE THE SUCCESS FACTORS IN DESIGNING ONLINE HELP?

The main challenge when designing aiding tools is to make sure that they do not make the system even more complex. In some cases integrating help does more harm than good (Neerinx & de Greef, 1993). Dessus & Hedon (1996) studied the different factors involved in designing effective task support tools. They found an interaction between 1) the type of task 2) user characteristics and 3) the type of interface or tool. Therefore the appropriate help tools must be carefully chosen by considering all of these factors.

Regardless of the type of tools, designers should follow some basic principles when developing them. Based on the collective knowledge gained from prior research, all task support tools should adhere to the following guidelines (Brusilovsky & Cooper, 2002; Cole et al., 1997; Kruithof, 2000; Leung & Mao, 2003; McGraw, 1997; Mehlenbacher, 1997; Neerinx & de Geef., 1993; Seak-Foon & Yu, 2001; Tuck, 1990):

- Integrate the tool into the work environment as much as possible;
- Provide access to just-in-time knowledge proactively, in a timely and relevant manner;
- Use knowledge about the user to adjust the tool to his or her level of domain and task expertise and familiarity;
- Use one interaction style and one visual style across the application to maintain consistency and to promote recognition;

- Adjust the diagnostic strategy to the users and to what the user is doing, dynamically adjusting the sequence of steps based on the user's response;
- Consider the user's level of familiarity with the vocabulary used in the application, familiarity with the concepts presented, and the application itself;
- Provide sufficient knowledge to users about what to do next. Developers may consider integrating new support tools if users appear to be lost most often in specific areas of the task;
- Facilitate learning and retention;
- Provide user control by allowing users to:
 - Either participate in a learning task or just watch it;
 - Decide on the sequence of the help items provided to them;
 - Choose to play it over and over again if the help tool is in video format;
 - Determine the type of assistance he or she wants among those available;
 - Decide under which circumstances to invoke the help system;
 - Decide on how much to use the support tool and leave it at any time;
 - Choose the level of detail of the information needed;
 - And, decide whether and when to go to task support components or return to the task at hand
- Model tasks by identifying the profile of the audience according to level of experience, preferred type and level of support, and learning styles;
- The support tools must minimize semantic distances, that is, use the audiences vocabulary and point of view;
- Whatever the help tools, the application's state should be preserved. Users should be able to return where they were and continue with their task;
- Knowledge imbedded in the support system can be updatable by the users and the system administrators;
- And, the structure of the help system and the application must match.

Some of these principals are described in more detail in the following paragraphs:

Integrated With the Task

Help systems should not only be integrated to the task at hand but they should take the initiative to present knowledge to users who seem to be lacking this knowledge. This remains a challenge since users differ in learning styles, level of knowledge, computer and domain expertise, etc. Designers of such systems must adopt the perspective of the performers of a task and provide for their needs (Benzanson, 1995).

Just-in-Time Knowledge

The main role of just-in-time knowledge is to support and enhance users' performance by providing the knowledge required by the task at the time they actually are executing the task. Prince and al (1999) observed that a good online facility can help make a very complex user interface easier to learn and use when information is presented just-in-time

Learnability and Retention

During the initial learning stage, a task is carried out by trial and error on a step by step basis. At some point, users are more able to retrieve solutions directly from memory and can generalize solutions to similar problems within the same domain. Therefore online help should provide procedural knowledge throughout the task for novice users, but make it optional since it may no longer be needed with more experience. Furthermore, consistency in software is important since users behave similarly when presented with similar challenges, because connections are established with prior knowledge.

Learnability is an important factor in software usability. Therefore, if we relate effective task support to usability, learnability must be taken into consideration. Task support tools that facilitate learning are more powerful than task support tools that don't support learning and retention. Cole et al (1997) showed that knowledge delivery must take place soon enough so that it is applied to the appropriate situation. Also, in support of good usability, the training tool must be intuitive enough not to require training on the tool itself.

Semantic Distance

Good task support tools minimize semantic distances (Lim et al., 1996). Input semantic distance is the mental process required to translate a goal pursued by the user into an intention that matches the language used by the application. Interfaces that are easier to use minimize the effort associated with deciding what to do and how to do it.

Contextual support

Support and performance tools must be designed and built to present the appropriate level of support according to the performer's needs, when it is needed and be presented in a form that will enable its most efficient use. Some tools are smart enough to tell users what is wrong or what is about to go wrong in a system (Brusilovsky & Cooper, 2002).

Design tools around tasks

Effective task support tools must be designed around user tasks. Unfortunately, most tools are based on

commands or functions instead of the task itself (Tuck, 1990). They must focus on answering users' questions instead of referring to the intricacies of the product itself like most paper or online help documents traditionally do (Hackos, 1997). Well designed and written task support tools focus on the users and what they are trying to do and they cluster information for different user types.

5.0 WHAT ARE THE DIFFERENT FORMS OF ONLINE HELP TOOLS?

When planning for the development of online help, it is often useful to consider these three general categories (Gery, 1995):

- Tools that are external to the application: These tools are usually invoked through a help button in the application menu or from a general help page. External tools are non-contextual, that is, they are usually related to the whole application. They can also be referred to at any time throughout the task. They can contain large amounts of information but the user must leave the application in order to consult them.
- Tools that are intrinsic to the application. These are inserted directly into the work space. Their main advantage is that they are easily and rapidly perceived by the user.
- Tools that are extrinsic to the application. These help systems most commonly consist of wizards, animated or non-animated tutorials, animated or non-animated helpers, etc. They are usually implemented as frames or web pages that overlap the application. As opposed to the other help tool categories, these tools are most often contextualized.

Table 1 describes tools in each of these categories, the type of information they may provide, the context in which they can be used, their respective advantages and disadvantages and the design elements that should be considered for each of them.

5.1 External help tools

As was mentioned earlier, external tools reside outside of the application and have a broad focus. Most often, the available external tools will all be assembled in a general help page, which can be accessed by the user through a help button in the main application menu. Since the information they provide is only accessed by the user when needed, a large variety of help possibilities can be developed to fit different user needs. For instance, novice users can find it useful to have a guided tour, some online training or a "step-by-

step” tutorial to introduce them to the main functions of the application. More experienced users may want more detailed information through FAQs, user guides, information bulletins or through related links or references. In all cases, it will be important to provide ways for users to obtain human support, either through e-mail or by telephone.

5.2 Intrinsic help tools

Very often, it is simpler for designers to include explanations and guidance in the main application page. Intrinsic help is probably the most widespread support used in Web pages today. However, in most of these pages, the help text takes up so much space that the user is overwhelmed with information and may have some difficulty finding the task items. This substantially increases the time to perform the task and can even discourage users to perform these tasks online. Intrinsic help that is not context sensitive (i.e. presented to all users all the time) will also interfere with the work of expert users or those for which this information is not needed or irrelevant. Since there are many advantages to providing intrinsic help, designers should use it carefully and only to communicate very short and important messages. Furthermore, these messages should be clearly separated from the task items (either by using a different format, color or page area) in order to not interfere with task execution.

5.3 Extrinsic help tools

These contextual help tools certainly offer the most advantages over the other groups of tools: 1) they usually refer to a specific task element and therefore reduce the risk of cognitive overload; 2) the information is provided just-in-time and therefore has a better chance of being used; 3) they can be invoked only when needed and therefore do not interrupt expert users; 4) they can take many animated and interactive forms that provide a more fun and more humane environment (Aberg & Shahmehri, 2001). Extrinsic tools appear only when needed and « just in time », either by being invoked the user or non-invoked, i.e. as a consequence of specific user actions. However, since non-invoked extrinsic tools disrupt the task, special care should be put on preventing their constant presence for expert users. Frames are advantageous over web pages because they are integrated within the application and the users do not have to flip back and forth between the application they are working with and a web page to follow the instructions given by the help facility.

6.0 HOW DO YOU DESIGN ONLINE HELP?

The first step in designing online help is preparing a style guide for all support tools to be provided in an application, or for all the Web applications included in the organization’s Web site:

- a. Define the concepts, vocabulary, writing conventions and organizational roles for online support development;
- b. Establish the standards for the different support forms in order to ensure consistency, and promote reuse of images and templates;
- c. In some circumstances, it may be interesting to design a figure that will be used to personify the online help facility. It can take a human form or be a character such as Microsoft’s paperclip;
- d. Prescribe the maximum length, time and bandwidth limitations for the different support forms;
- e. Provide guidelines for the design of support tools;
- f. Provide plans for screen layouts, navigation and graphics;
- g. And, develop and test a prototype of the whole online support system.

Once this general style guide is established, the design teams can initiate online support development. The following steps are suggested (based on Boggan et al, 1999; Horton, 1994) to choose and design the most effective online tools:

- 1-Analyze users and their profiles: All projects involving interface design, online help systems included, must start with a good understanding of the users, their tasks and their work context. Therefore, in this phase, information should be gathered about: who the users are (age groups, profiles, special needs, etc.), what is their level of experience with the task and the application, how they work and how they learn.
- 2-Task analysis: In order to provide appropriate help systems, tasks need to be analyzed in order to specify: the terminology used, how users search for information and the types of problems they usually encounter while performing the tasks.
- 3-Design: Using the information collected in the previous analysis, ideas for the online support need to be brainstormed, mind-mapped and a storyboard developed. Issues to be decided upon include the following: the types of topics to be used: procedural, overview, context-sensitive, interactive, etc. and the types of support tools to be used, from the list presented in table 1
- 4-Build: In this phase, the help content is developed using the appropriate tools, graphics and media.
- 5-Test: Before presenting the final help system to the user, it is important to test that all jumps and pop-ups work, that context sensitive material is

correctly implemented and that displays are adequate.

6-Usability test: Once the systems are fully developed and quality tested, they can be presented to samples of user groups to validate their usefulness and performance. These tests can determine whether users can find the information they need, how quickly they find it and whether the information is helpful. The system should also be tested with expert users, in order to determine if the help tools are distracting or annoying.

7.0 CONCLUSION

In 2000, Ben Shneiderman discussed the issue of universal usability and its challenges for Web-based services. With the growth of the internet, a large diversity of people are becoming dependant on services such as e-commerce, communication, education, health care, finance, travel and government. One of the challenges he described is to bridge the gap between what users know and what they need to know to be able to use these online applications successfully. Appropriate help tools are central to providing this knowledge.

In this paper, we reviewed different help tool characteristics and described some guidelines to building these tools. These should provide a helpful starting point for all application support design, particularly for those that address a large variety of user profiles and experience. However, as mentioned by Shneiderman, more research is needed in order to further develop these guidelines and to improve the effectiveness of online support. One important research area is how to support evolutionary learning, i.e. how to accommodate for the different levels of experience. Layered designs, progressive disclosure, user-controlled options and intelligent diagnostic agents are some examples of strategies that should be tested and implemented in the future.

REFERENCES

- Aberg, J., & Shahmehri, N. (2001). An Empirical Study of Human Web Assistants: Implications for User Support in Web information Systems. *SIGCHI'01*, 3(1).
- Benzanson, W. R. (1995). Performance support: Online, Integrated Documentation Training. In *ACM*. Savannah, Georgia, U.S.A.
- Boggan, S, Farkas, D., & Welinske, J. (1999). *Developping Online Help for Windows 95 Solutions*, Inc, Reading MA.
- Brusilovsky, P., & Cooper, D. W. (2002). Domain, Task, and User Models for an Adaptive Hypermedia Performance Support System. In *Proceedings of the UIU 2002 Conference*. San Francisco, California, U.S.A.
- Cole, K., Fisher, O., & Saltzman, P. (1997). Just in Time Knowledge Delivery. *Communications of the ACM*, 40(7), 49-53.
- Dessus, P., & Hedon, G. (1996). Effets du Support, de la Tache et de la Presentation dans la Consultation d'un Hypertexte sur l'Informatique a l'Ecole. *Hypermedias et apprentissages*, T.3. Paris. (pp. 167-174).
- Donahue, G., Weinschenk, S., & Nowick, J., (1999). *Usability is Good Business*. Retrieved July 27, from http://interface.free.fr/Archives/Usability_Is_Good_Business.pdf
- Gery, G. (1995). Attributes and Behaviors of Performance-Centered Systems, *Performance Improvement Quarterly*, 8(1).
- Grayling, T. (1998). Fear and Loathing of the Help Menu: A Usability Test of Online Help, *Technical Communication*, 45, 2.
- Hackos, J. T. (1997). Online Documentation: The Next Generation. In *SIGDOC 1997*, (pp. 99-104), Snowbird, Utah, U.S.A.
- Halsted, K. L., & Roberts, J. H. (2002). Eclipse Help System: An Open Source User Assistance Offering. In *SIGDOC 2002*. Toronto, Ontario, Canada.
- Horton, W. (1994). *Designing and Writing Online Documentation*, John Wiley & Sons, Inc, New York.
- Kruithof, N. (2000). Developing User Support Systems in Multidisciplinary Teams – New Opportunities and New Challenges. *Technology and teamwork*, Netherlands. (pp. 367-380).
- Leighton, C. & McCabe, C. (2002). Authentic Performance of Complex Problem-Solving Tasks with an EPSS. In *Proceedings of the Media 2002 World Conference on Educational Multimedia, Hypermedia, and Telecommunications*. Denver, Colorado, U.S.A.
- Leung, Y.W., & Mao, J-Y. (2003). Providing Embedded Proactive Task Support for Diagnostic Jobs: A Neural Network-Based Approach. *Expert Systems with Applications*, 25, (pp. 255-267).
- Lim, K. H., Benbasat, I., & Todd, P. A. (1996). An Experimental Investigation of the Interactive Effects of Interface Style, Instructions, and Task Familiarity on User Performance. *ACM Transactions on Computer-Human Interaction*, 3(1), (pp. 1-37).
- McGraw, K. L. (1997). Defining and Designing Performance-Centered Interface. In *Interactions*, March and April 1997, U.S.A.
- Mehlenbacher, B. (1992). Navigating Online Information: A Characterization of Extralinguistic

- Factors that Influence User Behavior. In *SIGDOC 1992*, (pp. 35-46). North Carolina University, U.S.A..
- Neerinx, M. & de Greef, P. (1993). How to Aid Non-Experts. In *InterCHI 1993*, (pp. 165-171), Netherlands.
- Parush, A. & Kaporovsky Parush, D. (2001). Online Help: Too Much of a Good Thing? *Usability and User Experience Newsletter*. Retrieved (No date) from <http://www.stcsig.org/usability/newsletter/0101toomuch.html>.
- Prince, R., Su, J., Tang, H., & Zhao, Y. (1999). The Design of an Interactive Online Help Desk in the Alexandria Digital Library. In *ACM*, 99, 217-226, University of California.
- Seak-Zoon, R. & Yu, Byeong-Min (2001). Strategies for Building Integrated EPSS. In the Annual Proceedings of Selected Research and Development. 1-2, (pp. 543-549), Atlanta, U.S.A..
- Shneiderman, B. (2000). Universal Usability, *Communications of the ACM*, 43(5).
- Spool, J.M. (1998). *Making Online Information Usable, Eye for design*. Retrieved (No date) from <http://www.uie.com>.
- Tuck, R. (1990). Help by Guided Tasks: Utilizing UIMS Knowledge. In *CHI 1990 Proceedings*, (pp. 71-78), Utah, U.S.A..

Table 1 (a) List of online help tools and their characteristics

| | Description | Type of information | Context | Advantages | Disadvantages | Design elements |
|---|--|--|--|---|---|---|
| <u>External</u> | <u>Information</u> or <u>Help</u> invoked through the main menu or in a general help page. Outside of the application. Usually refers to the whole application. Available at any time. | <u>Any kind</u> of general information depending on the type of aid | <ul style="list-style-type: none"> - <u>High Volume</u> of content - Establishes a <u>basic mental model</u> OR provides explanation of <u>general concepts</u> - <u>When</u> contextual tools are difficult to implement - <u>Standards</u> (aids that are always available such as phone numbers, a search engine, etc) - Provides answers to less common questions | <ul style="list-style-type: none"> - <u>Higher volume</u> of information - <u>Allows users to get a general overview of the application</u> | <u>Requires the user to leave the application</u> | <p>Effective and constant presentation of the different help topics within the help page</p> <p><u>Easy to find</u> in the application's main menu.</p> |
| FAQ | List of <u>commonly asked questions</u> . This information can eventually be integrated in contextual help tools | Questions - answers | List of <u>frequently occurring problems</u> (ex: provided by the call center) | Easy way to <u>answer to frequently asked questions</u> | <u>Harder to find by users</u> | <u>Facilitate search</u> (sorting by categories, most frequently asked questions, table of contents) |
| Search Engine | Information search with keywords | List of links based on keywords, can be <u>organized and filtered</u> | Quick search mainly used by experts | <u>Flexible and fast</u> for expert users. Easy to set-up | Difficulty in finding the <u>right keywords</u> ; <u>nonrelevant and abundant results</u> | <u>facilitate search</u> (divide into categories, sort, filter, use synonyms; link to e-mail when unsuccessful search) |
| Information bulletin (through subscription) | <u>General information</u> on services and updates | <u>Electronic document</u> or e-mail | <u>For frequent users</u> , contains relevant information about <u>updates and services</u> | Can inform <u>frequent users</u> on changes that may modify their way of using the services | Only subscribed users receive the information | Publishing and communication issues |
| User's manual | Describes <u>how to use the application</u> | <u>Any kind of Information</u> provided in traditional documents | <u>General overview for novice users</u> , can be printed for frequent users or difficult tasks | May <u>contain a lot of information</u> . <u>Quick search</u> with index or table of contents | Requires time for reading; <u>important memory load</u> | <u>PDF or indexed document</u> |
| Tutorial | Set of frames showing <u>how to use an application</u> . Progress is controlled by users | <u>General description of the application</u> with <u>images, audio and text files</u> | <u>General introduction</u> for novice users . Can be used as a <u>promotional</u> | Allows <u>to initiate novice users</u> , to build a mental representation of functions | Requires <u>attention and time</u> | <u>Focus on general use</u> , <u>avoid details in order not to overload memory</u> |

Table 1 (b) List of online help tools and their characteristics

| Category | Description | Kind of information | Context | Advantages | Disadvantages | Design elements |
|-----------------------------------|---|--|---|---|--|--|
| Human Helpdesk | <u>Human helpdesk</u> through e-mail, chat, and/or by phone | <u>Personalized</u> and interactive support | <u>Last resort</u> for users in difficulty | Flexible, easier for some users, to solve more difficult problems | <u>Response time</u> , quality of answers | Define conditions for chat use; well trained support staff |
| Multimedia presentation | Can use <u>any possible media combinations</u> (graphics, animation, videos, text, sound). | <u>General presentation</u> of the application and its context | <u>General Introduction</u> for novice users. Can be used as a promotional tool | Allows to <u>initiate novice users</u> on the general objectives of the application | Requires <u>attention</u> and <u>time</u> , plus a <u>high bandwidth</u> | <u>Pleasant to watch</u> , useful and relevant information |
| On-line references (useful links) | <u>List of electronic references</u> or hypertext links | Relevant <u>additional information</u> | For users who need <u>additional information</u> | Allows links to other <u>relevant information sources</u> | Content of links out of <u>the application's control</u> | Grouping and ordering strategies that help the user's search |
| Training/simulation | <u>Interactive tools</u> : – Computer-Assisted Teaching – Application simulator | Training <u>toolkit</u> | The application requires more <u>developed training</u> | Allows to provide <u>just-in-time learning</u> , avoids face-to-face training and/or support - documents. Can be adapted to the user's competency | <u>No human contact</u> , <u>not flexible</u> | <u>E-learning design principles</u> |
| <i>Intrinsic</i> | <u>Help tools embedded in workspace</u> . | – Tips, – Examples, – Control Lists, – Definitions, – Etc. | – <u>Sufficient space</u> within the page – <u>High number of</u> novice users | – Quick use – Easy to find | – <u>Information overload</u> within the page | – <u>Separate</u> from task components (with color, frame, location) – <u>Minimize</u> message length |
| Text and graphics in the page | <u>Displays information directly within the application</u> , such as a process steps, « tips », examples, control lists, definitions, etc. | Idem | Idem | Idem | Idem | Idem |
| Contextual text and graphics | <u>Same information</u> but appears <u>following a user's actions</u> | Idem | Idem | Idem, + contextual | Idem + changes the page presentation | Idem |
| | | | | | | |

Table 1 (c) List of online help tools and their characteristics

| Category | Description | Kind of information | Context | Advantages | Disadvantages | Design elements |
|--------------------------|--|--|---|---|--|--|
| <i>Extrinsic</i> | <u>Help tools embedded in the application, overlap</u> the workspace. Invoked contextually or appears automatically under some conditions. Must be closed to go back to the task in progress | <u>Any kind of contextual help</u> | <ul style="list-style-type: none"> – When <u>contextual information</u> is required – <u>Difficulties met</u> by the user on a specific step of the task – When the <u>consequences</u> of errors are significant – When <u>different rules</u> or procedures can be applied | <ul style="list-style-type: none"> – Invoked: – <u>on demand</u> only – textual and just -in-time – Automatic: – <u>just-in-time</u> without being requested | <u>Interferes</u> with task in progress | <u>Minimizing message length</u> , make it visible, separate from task elements |
| Adviser (roll over) | Small frame <u>providing pieces of advice</u> or <u>short explanations</u> . Appear when the mouse moves over an icon or text. | Short textual explanations | <u>Very short textual information</u> on a specific element | <u>Appears and disappears</u> with the mouse's movements | <u>Remains invisible until rollover</u> | <u>Must be used sparingly</u> |
| Dialog box / capsule | <u>Provides information</u> in a "pop-up" frame | Demonstrations, Explanations, Examples, Control Lists, Definitions, Etc. | <u>More contextual information is needed</u> , multimedia | Allows to offer more detailed information without exiting the software. | – <u>Distracting, disrupts the task</u> | <u>Depends on the medium</u> . General presentation of text, video, or animation capsules. |
| Wizard/ Assistant/ Agent | Pop-up, window or frame offering <u>suggestions, pieces of information, action choices or contextual search</u> . Intelligent Wizard metaphor. Animation or sound to attract attention. | <ul style="list-style-type: none"> – Suggestions – Pieces of information – Choices of action – Contextual search | <u>Interactive exchange</u> ; choice or action depending on user needs and context | <u>Simulates human support</u> | <ul style="list-style-type: none"> – <u>Distracts, disrupts the task</u> – <u>Sometimes annoying</u> | <u>Judicious choice</u> of its use, location and animated functions |