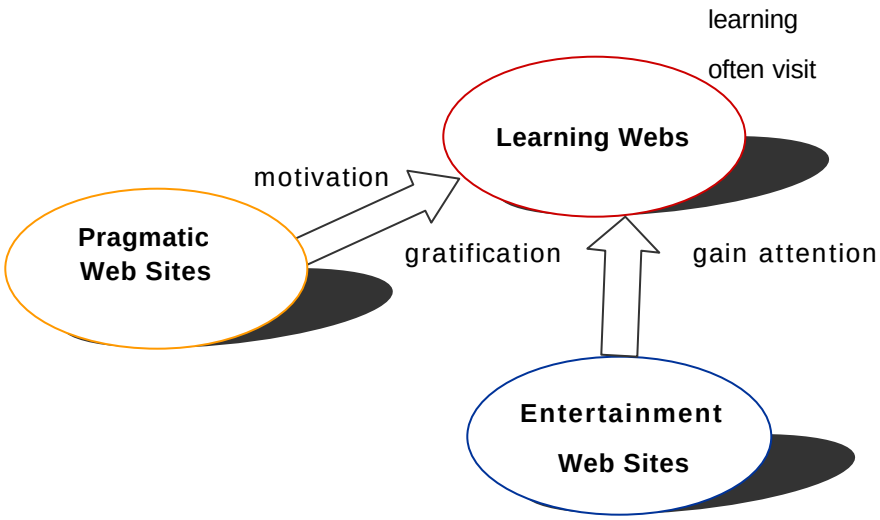
3.1. LEARNING WEBS

The real space is retired at the expanse of virtual. The students as Internet-users follow the same trend they stay more and more time connected to the Net. They are motivated to visit one or other site from cyberspace. The sites are with different subjects some of them are used for study – Learning Webs. To learn via the Net is necessary first to have 'ready" educational web sites and second "ready" students to use them - students with needed skills and knowledge to use the computers and Internet.

In Bulgaria the improving quality of educational system has started. One of the main purposes of the Educational Reform is implementation of Information and communication technologies as it was said above Section 2.1.4. But, in schools, there were not developed computer infrastructures. Students have Internet access from home or Internet clubs. There are well maintain Internet clubs – it's not solution but it is an issue for improving students' computer and Internet skills.

To support students effort in them school tasks there are different web sites. The challenge is to be developed educational web sites that gain students' attention and they visited them often and use them in proper way – as support or main source of information for education. As it was mentioned above, the goal of this study is to identify these motives from both sides (pragmatic and entertainment) and then to use them for creating the effective educational sites that will help and support



students. Driving forces are attitude and motivation - most for fun, less for pragmatic reasons (including educational). Motives are general dispositions that influence students' action taken to fulfill needs or wants. Motives are key components of this study. Perspective are searching the necessary useful information, and in the other the students attention is gained from the entertainment sites – chat, games, music, movies, and so on (Figure 3.1.1).

Figure 3.1.1. Pragmatic & Entertainment

How to be successful one educational site? Development of one Internet application as a learning web site has some aspects:

- to cover *educational needs* – content of the site has to relate to the Bulgarian curriculum – i.e. to be educational effectiveness and organizational-context – environment sub factor;
- to cover the *factors influencing an individual's use of a technology* innovation in learning-related practice According to Collis, & Moonen (2001) the site have to be easy of use, and oriented to personal engagement about technology use;

- to cover the *motivation and uses-and-gratification factors* for using the Internet – they relate to the four cyberpsychological dimensions: basic psychological features of Cyberspace, psychology of the individuals, relationships, and group dynamics in Cyberspace and main questions of the study – about the motives for using the Internet and the affect of certain antecedents and perceptions of media attribute to the motives, attitudinal, and behavioral outcomes.

First two aspects relate to the 4Es models of Collis, & Moonen (2001) – *Easy of use*, (personal) *Engagement*, (perceived) Educational *Effectiveness* and (institutional) *Environment*. 4Es model gives the four main features influencing students' use of Internet in learning-related practice. These main features have to be followed developing the learning web.

There are mentioned several remarks and recommendations about the aspects for well developed web site - web design features and cyberpsychological features - the process of understanding of students' needs and motivation.

The educational content of the sites is not purpose of this study and it will be not discussed here. Let just mention four approaches according to Illich (1973) that enable the student to gain access to not only for curricular but any educational resource, which may help him to define and achieve his own goals:

- *Reference services to educational objects* - which facilitate access to things or processes used for formal learning. Some of these things can be reserved for this purpose, stored in libraries, rental agencies, laboratories and showrooms like museums and theatres; others can be in daily use in factories, airports or on farms, but made available to students as apprentices or on off-hours.
- *Skill exchanges* - which permit persons to list their skills, the conditions under which they are willing to serve as models for others who want to learn these skills, and the addresses at which they can be reached.
- *Peer matching* - a communications network, which permits persons to describe the learning activity in which, they wish to engage, in the hope of finding a partner for the inquiry.
- *Reference services to educators-at-large* - which can be listed in a directory giving the addresses and self-descriptions of professionals, paraprofessionals and freelances, along with conditions of access to their services.

3.1.1. WEB DESIGN FEATURES

The web sites obey to the visitors' rules. The Internet users have own request. They don't read whole article, because they feel not productive if they read whole. The articles have to start by telling the reader first conclusion, follow by the most important supporting information, and end by giving the background. This style is known as the *inverted pyramid* for the simple reason that it turns the traditional pyramid style around. According to Nielsen (1996) "the Inverted Pyramids in cyberspace becomes even more important since we know from several user studies that *users don't scroll*, so they will very frequently be left to read only the top part of an article. Very interested readers *will* scroll, and these few motivated souls will reach the foundation of the pyramid and get the full story in all its detail."
Discussing the web design features. There is important to take into account this phenomena for the Internet users that they *don't really read web pages, they scan the pages*. Users looking for their 'nugget' of information are more like hunters than like someone out for a leisurely stroll, picking out individual words and sentences. According Nielsen (1998) there are some plausible reasons for that:

- reading from computer screens is tiring for the eyes and about 25 percent slower than reading from paper.
- the Web is a user-driven medium where users feel that they have to move on and click on things.
- each page has to compete with hundreds of millions of other pages for the user's attention.
- modern life is hectic and people simply don't have time to work too hard for their information.

These four facts are so important when the goal is to be created often-visited site. *The user is on focus.* User Centered-Design is a philosophy and a process. It is a philosophy that places the person (as opposed to the 'thing') at the center; it is a process that focuses on cognitive factors (such as perception, memory, learning, problem-solving, etc.) as they come into play during peoples' interactions with things.
The user-centered-design can improve the usability and usefulness of everything with which people interact. Usefulness relates to relevance; do the functions, information, etc., match what the user actually needs and usability relates to ease-

of-use. According Katz-Haas (1998) there are usability guidelines for establishing of one learning web (site) – to be effective, easy of use, and to engage the users:

- *Visibility* - helps users from correct mental models of the 'thing'—models that help users predict the effect(s) of their actions
- *Memory Load* - the site should reduce user memory load
- *Feedback* – users have to receive immediate feedback when they act
- *Accessibility* - users need to find information quickly and easily
- *Orientation/ Navigation* - web users do not feel lost
- *Errors* - important to minimize user errors and provide users with mechanisms that allow them to recover quickly from errors
- *Satisfaction* - the site should be pleasant to use and look at
- *Legibility* - text should be easy to read
- *Language* - short sentences, 'everyday' words, active voice, active verbs, verbs (instead of noun strings or nominalizations), simple sentence structure
- *Visual Design* - should be the user's ally.

The next step after creating of one learning web is to be disseminating among the students. The establishment of one web site is not the final step in the process of promotion on the Internet. Van Doren, Fechner, & Green-Adelsberger (2000) distinguish four possible scenarios:

- involves the establishment of one- or two- web sites on the Internet
- not only establish a presence on the Internet, but also gain user attention in a way that encourages repeat visits to the site
- more involved, it offers detailed students service tools such as on-line help, on-line customer feedback
- complex situation where web site become a distribution channel for an educational purposes.

3.1.2. CYBERPSYCHOLOGICAL FEATURES

Understanding of students' needs and motivations is a process according Illich (1973). The students intuitively know what the schools do for them. The students are thereby "schooled" to confuse teaching with learning, grade advancement with education, a diploma with competence and fluency with the ability to say something

new. Them imagination is "schooled" to accept service in place of value. Uses-and-gratification framework may be use to examine how social and psychological antecedents (contextual age and unwillingness to communicate), and perceptions of media attributes (social presence). The motives for access to Internet based on this theory assumes students communicate or use media to gratify needs or wants (Papacharissi, & Rubin, 2000). It focuses on motives for media uses are factors that influence motives, and outcomes from media related behavior. Besides the Internet's unique nature, a student's own social and psychological characteristics affect how he/ she uses the Internet. In our case for Bulgaria – the post-communist country with soon opened borders but without financial freedom – the Internet appears as a cheapest travel agency, library and entertainment. The Internet possess *interactive / social* and *informational / task* – oriented dimensions for users. In this respect, the needs the Internet fulfills may not be too different from the need met by more traditional and media channels, which also enhances the opportunity to reinvent one's identity and to compensate for a sense of inadequate social interaction. Similar to finding about more traditional media, social and psychological characteristics should influence people's expectations and uses of the Internet.

According to Haraway (1991), the advent and diffusion of cyberspace can eradicate or blur distinction between human-machine, and cyberspace presents an inviting environment for communication and identity exploration. It is anonymous and textual nature of cyberspace that allows one to overcome "identity fixes", such as gender, looks, and disabilities. People choose to explore certain sides of their personalities (e.g. assertiveness) more extensively, or even invent virtual life personae different from their real life personality. The role of the computer is as a prosthetic device that catapults one into "cyberspace interaction".

Media perceptions. Due to the lack of nonverbal cues, computer-mediated communication is said to be low in social presence in comparison to face-to-face communication. Social presence related positively to personal identity satisfaction. The ability of computer-media communication media to transmit interpersonally oriented content effectively, social presence should help differentiate between informational and interpersonal uses of the Internet.

Affinity, or the perceived importance of communication behavior or channels has been a significant component of media-use patterns (Papacharissi, & Rubin, 2000) Communication satisfaction is a communication outcome that is related to fulfilling

our expectations through interaction, and should be related to interpersonal disclosure and relationship development. The motivations and skills predicted communication satisfaction.

3.1.3 ON-LINE COMMUNITY DEVELOPMENT

The common interests of the students define them as a group. The group behavior on the Internet is fourth cyberpsychological dimension, Chapter 2, section 2.2.2. The purpose of the educational sites – often-visited and useful for students with possibility for communication among them - are base to consider the learning web as an on-line communities. The community is organic and the developers of the sites think about how to support social interaction and community evolution – the norms of this community, what policies are needed to guide behavior in the community. Preece (2001) has made several recommendations for creating the successful on-line community. They may be in use and for Learning Webs, because them goals is the same – to create place in Cyberspace visited from students for social communication and useful information. The next is the design of the site that supports the community. It has to have good usability:

- to know what community wants - what the purpose and define it clearly
- to understand the limitations of community – are the people experienced users or not, what kind of technology are they using, etc.
- to think about how to support social interaction and community evolution –what policies are needed to guide behavior in the community
- to pay attention to the design of the software that supports the community - make sure that it has good usability.

Developers' perspective as is described above and is shown on the Figure 3.1.2 design usability, support sociability.

Figure 3.1.2. Community evolution

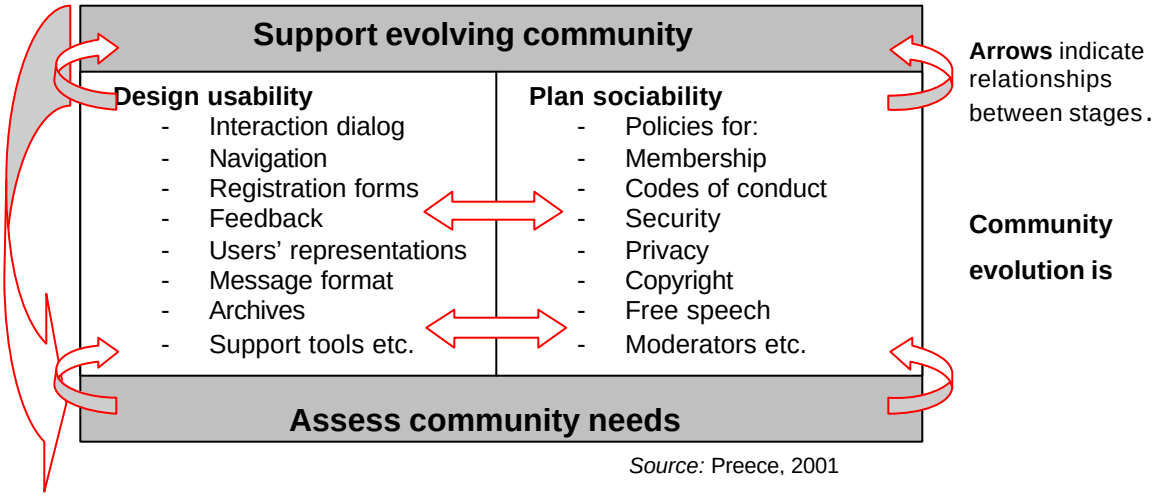
The important message is that end users must be involved throughout the development - particularly right at the beginning and all through.
When a new educational community is created the user-centered design has to increase users' satisfaction and productivity. To develop user-centered site – site for on-line community is necessary to:

- Involve users from the beginning
- Know the users
- Analyze user tasks and goals
- Test for usability—repeatedly

Again we get back to what is the purpose of the community and who is using it, lack of policies so anything goes, over-crowding so that discussion moves to fast, not being able to follow discussions etc.

3.1.4 RECOMMENDATIONS FOR DEVELOPING OF LEARNING WEB

According to 4Es model of Collis, & Moonen (2001), to the guidelines about the web site design, cyberpsychological features and creating of one on-line community we may to note down the most important features for one learning web:



Source: Preece, 2001

- *Clear purpose* – the subject of the learning web,
- *Know the users* - Reference services to educational objects and to educators-at-large - limitations of community – user experience and expectation
- *Involve users* from the beginning and analyze their tasks and goals,

- *Visual Design & Visibility* - should be the user's ally and predict the effect(s) of their actions,
- *Accessibility, Orientation/ Navigation* - users need to find information quickly, easily, and do not feel lost, *Errors* - minimize user errors
- *Skill exchanges, Peer matching, Archives;*
- *Memory Load* - the site should reduce user memory load,
- *Satisfaction* - the site should be pleasant to use and look at,
- *Legibility & Language* - text should be easy to read, short sentences, 'everyday' words,
- *Communication tools Interaction dialog, Chat, Message format;*
- *Feedback* - users have to receive immediate feedback when they act
- *Policies for: Security, Privacy, Copyright.*

Internet motives influence behavioral (patterns of Internet exposure) and attitudinal (Internet affinity and satisfaction) outcomes of Internet use.

In next chapter will be identified the typical motives for Bulgarian students.

But let first consider how to identify the motives and certain antecedents & perceptions of media attribute affecting to the motives. Next section presents developing of the instrument for identification – the web-based questionnaire.