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WEB BASED TRAINING AS A FACTOR OF QUALITY IMPROVEMENT FOR APPLYING CNC TECHNOLOGY

Abstract: *Web based training (WBT) is part of the biggest change in the way our species conducts training since the invention of the chalkboard or perhaps the alphabet. The development of computers and electronic communications media has removed barriers of space and time. We can obtain and deliver knowledge anytime anywhere. Although WBT is a relatively new phenomenon, it has already demonstrated some distinct advantages over traditional classroom training and over disk –based computer – based training . WBT has all the advantages of disk-based computer-based training, such as constant availability, nonjudgmental testing , and instant feedback. WBT does not offer the ability to use multimedia freely but does have some advantages of its own: Access to Web-based resorces, Centralized storage and maintenance, Colaboration mechanisms. WBT combines the collaboration of face –to-face training and the anywhere-anytime availability of computer-based training. WBT that implements effective instructional design may actually provide a better learning experience than classrooms or disc-based computer-based training. Learners who use technologies to discuss issues, research questions, and solve problems improve their critical reasoning problem solving, and creativity, in writing classes, learners asked more substantive questions and commented more constructively on the writing of peers. Learners expressed their reasoning more clearly and made more specific suggestions for improvement. WBT is not all advantages and benefits, it has costs, requires compromises, and possess serious risks. Most of these negatives can be overcome with good design-but only if you acknowledge and understand them. The technologies of WBT are well suited to structured technical knowledge. As tools and technologies of WBT are made easier to use , more people will use them in more environments for more subjects.*

Keywords: *quality of education, training process, new technology, risks of training process, vulnerability, production, technological advancement, efficiency and effectiveness of training, Web based Training*

1. INTRODUCTION

After serious analysis and testing of clients we shall determine the level of training and according to the defined level appropriate clients. How to define ideal clients? Following characteristics of individual have to be taken into account when deciding who is eligible to be the right client:

- Learn independently and view learning positively
- Are self-disciplined, manage time well, and enjoy working alone
- Express themselves clearly in writing
- Have good basic computer skills and value the role of technology In business and learning
- Need to acquire new knowledge now but cannot easily attend traditional training, for example those who travel or live in a remote location
- strive toward solving complicate dilemmas
- Have a definite goal, but before all, want to acquire specialised knowledge in this case presented in new technologies-programming and managing of CNC machines by ICT and to receive certification, a degree, or the ability to perform a specific task
- Are moderately experienced in a field and already understand the basic concepts of that field

The ideal course
What does imply the term ideal WBT project? WBT excels at efficiently teaching precisely defined objective knowledge, such as:

- Step-by-step procedures
- Scientific and business concepts
- Syntax and vocabulary of human and computer languages
- Mechanical skills that must be performed speedily
- clear and fast communication between instructors and clients and between clients themselves
- commitment towards the new technologies
- expanding knowledge in IT areas
- increasing efficiency and effectiveness in knowledge implementation.

For our Web training we shall start from quality-selected instructor, taking care about his references and also about his practically tested trainings, simultaneously taking care about disposable resources and training needs of the learners for training created on the basis of previously set queries, we shall determine and start training toward preset deadline and curriculum.

For your first Web-based course, pick an existing instructor-led course that covers such well defined knowledge. Select a course that is well designed but that is not working because it costs too much, occurs too infrequently, or cannot keep up with demand. Make that course your first Web-based course and the odds are in your favor.These two advices should be taken as a supplemental.

2. ADVANTAGES OF WBT

Although WBT is a relatively new phenomenon, it has already demonstrated some distinct advantages over traditional classroom training and over disk-based computer-based training (CBT). WBT has all the advantages of disk-based CBT, such as constant availability, non-judgmental testing, and instant feedback. WBT does not offer the ability to use multimedia freely but does have some advantages of its own:

- Access to Web-based resources
- Centralized storage and maintenance
- Collaboration mechanisms
- WBT enables better teaching techniques - WBT that implements effective instructional design may actually provide a better learning experience than classrooms or disk-based CBT.

WBT combines the collaboration of face-to-face training and the anywhere-anytime availability of CBT. And WBT is just in its infancy. Everyone agrees it is going to get better and better. Additionally there is a certain cost-saving aspect of WBT. What kinds of costs are saved? How does WBT save money? Mainly by reducing some of the largest costs for training. Here are some cost savings you should consider for your project.

Travel expenses-Up to 40% of the cost of corporate training is for travel [26]. Aetna estimated that for training 1200 employees, travel expenses alone would cost $5 million USD-that's $4166 per person [17]. Travel expenses can include airfare, mileage, parking, taxi fares, lodging, meals, and phone calls back to the office.

Facilities and supplies-WBT reduces capital costs for training facilities. Because clients take the class from their own offices or homes, the need for classrooms, chairs, desks, tables, whiteboards, easel pads, and other classroom supplies is reduced or eliminated. Virtual laboratories and simulations can replace expensive laboratories and test equipment. Because many of the instructional resources are on the Web, the need for libraries, bookstores, photocopying machines, and storerooms is cut.

These savings allow companies and schools to deliver more learning without adding more facilities. We will mention the example of Kent State University, working with IBM and ILINC, built a distributed learning network that enabled Kent State to increase enrollment by 30% without adding additional buildings [18]. Regarding new technologies, especially training based on CNC machines, it is necessary to acquire certain financial investing; still there is no classically-approached analysis about those costs, but it is evident that with the implementation of WBT these costs will be decreased to its minimum, which will be the goal of the author in his further research.

Reduced administrative costs-Some WBT systems can perform-or at least simplify-many time-consuming administrative chores and by that decrease its costs.

Distributing course catalogs – is being performed electronically which simplify procedure and its costs.

Registering students - is being performed electronically which simplify procedure and its costs.

Distributing course materials and handouts - is being performed electronically which simplify procedure and its costs, but additionally providing feedback based on filled form.

Savings in time; Financial gain

Employees are usually paid for the time they are in training. Although the time spent learning may not be less with WBT, the time spent traveling to training definitely will be less. For example, for a three-day classroom course, learners may spend a day traveling to the training and a day returning, thus three days of training can cost five days of salary. In case of applying WBT ten days of training cost just three days of salary. And, if employees choose to take training on their own time, it can cost less still. This is especially important when clients bear training costs themselves.

Why WBT activates clients?

Well-designed WBT challenges learners. To progress in a WBT course, learners must actively navigate the course. They may be required to select which lessons to take and in what sequence. Activities and practice sessions alternate with presentations. Learners cannot just sit back and listen to a lecture or passively watch video. They must think and respond. They must actively learn. Although it is possible to design WBT in which learners are passive, it is just as easy to include meaningful interaction and interactivity, which depends from quality of the instructor.

With WBT, learners feel more in control of their learning. Because learners feel in control, they take more responsibility and learn more effectively.

WBT exposes clients to real-world data

WBT can expose learners to a whole world of data and experiences. Access to the real world can make learning concrete and pertinent. The real world provides a sounding board for ideas. The Web can expose learners to realistic data for study and analysis. Because learners can copy the data into their spreadsheets, they can

analyze large collections of data almost as easily as typing in the paltry sets of data used for classroom examples. And the-reat-world data has all the irregularities, exceptions, and messiness that learners must deal with on the job anyway. Having access to such large messy datasets was found useful by 85.7% of learners in one experiment [18].

Thanks to government agencies and universities, the Internet is loaded with statistical analyses, data collections, and scientific reports on technique, economics, medicine, astronomy, crime biology, geology, and dozens more subjects. For some fields, such as weather and finance, real-time feeds provide up-to-the-moment data.

WBT provides a more in-depth learning experience

WBT can make learning more complete and comprehensive by exposing learners to more aspects of a subject. In one project majority of interviewed attenders felt that "well-designed, effective technology-supported projects provided students with a more in-depth learning experience than do traditional approaches ... " [19].

WBT develops better thinking skills

Learners who use Web technologies to discuss issues, research questions, and solve problem improve their critical reasoning, problem solving, and creativity, especially in new technologies-trainings based on CNC machines, when implementation of ICT technologies. In writing classes, learners asked more substantive questions and commented more constructively on the writing of peers. Learners expressed their reasoning more clearly and made more specific suggestions for improvement.

WBT lets learners reflect before responding

When events are conducted by e-mail or discussion groups, learners can take their time answering questions. Learners take longer to respond and think through their answers more deeply. Most say they learn better when they have time to think before speaking or writing.

WBT is sometimes significantly better

In many cases, WBT is not just as good as classroom training but better. Here are a handful of examples:

1.Clients in the virtual class spent more time on class work and understood the material better. At the end of the class they felt more positively toward math. The virtual class provided more perceived contact with peers and appeared more flexible to learners.

2.Present experience already shows that training in virtual classrooms increased enrollment by a factor of three while increasing student satisfaction by 20% [17]. Retention increased by 25%, student satisfaction by 30%, and demand by 30%. Costs decreased by 80% [18].

3.Special characteristic of WBT is its flexibility which enable moment reaction on present situation and present questions.

2.1 Other advantages for learners

1. Learners benefit from other aspects of WBT besides a more effective learning environment. Here are some of the additional advantages that learners say are important to them.

Learners can get the best instruction available

"I want to know I am getting the best training possible. I can shop around for the best course on the Web."

With courses available on the Web, learners can select the best courses, the best schools, the best instructors, and the best fellow learners. As more courses go on the Web, competition will develop and choices increase. Corporations will realize the advantages of providing employees with more choices than provided by local vendors or in-house training departments.

At least with the Web, learners are not limited to the choices provided by their in-house training department or local training providers.

Furthermore, the quality of self-directed courses is consistent for all learners. The learners are not at the mercy of the instructor assigned to teach the course this particular session.

2. Discussions get needed time

When using e-learning and discussion groups,

learners can take time to compose replies. They can attach supporting materials, cite sources, and prepare graphics and other media, this is particulary interesting in solving more complex problems in CNC machines programming.

3. Training occurs just in time

" I need training now. Not next quarter, not next month, not next week. I need training right now."

With WBT, learners can get training right when they need it. With self-directed WBT, learners do not have to wait for a class to form and they can proceed at their own pace. When a need arises, they can learn what they require. They can learn about a new product the night before pitching it to a potential customer. They can brush up on interviewing skills a few hours before an interview, it is nice to create in advance term-plans in accordance with learners.

4. Learners set the pace and schedule

Many busy workers cannot fit training into their schedules. In an effort to accommodate them, many training organizations are now offering classes on Saturday mornings and Sundays. WBT goes further, making courses available 24 hours a day, 7 days a week, this is particulary aggravating circumstance regarding training for managing and using CNC machines. No one is completely happy with the pace of an instructor-led course. It is too fast for some and too slow for others-and the instructor is always checking the clock on the wall.

With WBT, learners have more flexibility in learning at their own speed. Many WBT courses do not require consecutive time. Learners can take the course at their own pace. Some can study full-time while others devote a few hours a week to the course. Learners can repeat lessons they find especially interesting or difficult and skip others they have already mastered or do not need.

Other advantages for instructors-Instructors moving from classroom to WBT may not immediately see the advantages WBT offers and how it can help them conduct classes more effectively and conveniently. Some of these advantages mirror those for learners; others are new.

1.Instructors can teach from anywhere

WBT benefits mobile instructors as much as mobile learners, which does not relate at all on managing and using of CNC. The instructor can teach the course from any location with an Internet connection. This opens up the ranks of instructors to experienced, active experts who cannot meet the demands of regular classroom meetings, author`s experience tells that this way of communicating in WBT is especially helpful in training for CNC machines programming and one example from that training will be given.

2.Instructors travel less

Because instructors do not have to travel to remote sites to conduct training, they spend more time on productive and enjoyable activities. Instructors can spend more time planning, producing, and polishing their courses. They can also conduct classes more often. Instructors may spend more time with their families and, if they travel less, they are less prone to exhaustion and burnout.

3.Course content can be dynamic

Instructors can "add to the course pack" as the course progresses. They can do this from home at anytime when an inspiration hits. Instructors can more quickly respond to changes in subject matter. A procedure is updated, a price-list revised, or the terms of a contract amended. The course can be kept up to date with minimal cost-no reprints.

The content can grow and change to respond to learners' needs, to correct mistakes and omissions, and to incorporate better content. Revising the course becomes a routine, continual activity, not a frantic effort between class offerings.

4.Instructors save time

WBT reduces the "administrivia" of running a course. Many of the routine, but time-consuming tasks of administering a course can be automated. With WBT, the instructor is freed from:

• Having handouts and course packs printed
• Handing out assignments, notes, and other papers
• Collecting assignments

• Returning graded assignments
• Making announcements
Other advantages for organizations
WBT saves organizations money. But the benefits do not end there. Some advantages from an organizational and financial perspectives are obvious.
WBT delivers high-quality training
1.WBT can ensure that all the appropriate people in the organization get the same quality of training at the same time. They hear the same message presented in much the same way. With instructor-led WBT more people can attend the classes.
And, with self-directed WBT learners can easily fit the training into their busy schedules.
All learners can reach a specific level of mastery. WBT can easily certify that a workforce has mastered a subject area.
2.WBT provides training around the globe without travel
WBT provides training to the whole world as it reduces the need for travel. More people spend more time at their desks and in the field-doing their jobs.
3.WBT gives organizations flexibility
Web-based technologies are flexible. They provide many choices for how to deliver learning, provide interaction and interactivity, and price units of teaming. You can use Web technologies to implement any learning methodology you choose from recidivist behaviorism to exogenous constructivism. Courses can be revised midstream. Material can be added, revised, or deleted, as the course is going on. Courses can be adapted to the needs-of a specific class or individual learner. Producers can bill by course, by enrollment, by student, by site, by topics accessed, or by time and length of access. Such flexibility makes it easier for managers to fit training into their budgets.
4.WBT integrates training with work
Learning takes place in the learner's work environment where the knowledge will be applied. This communicates the message that learning is a natural part of work, not an unwanted interruption or an entertaining but unrelated vacation.
5.WBT creates valuable learning resources
WBT courses generate valuable learning resources. Chats and forum discussions can be archived and abstracted. Feedback forms provide valuable tips on how to improve the course. Student projects provide a starting point and exemplars for future classes. Some student projects can generate works of value outside the course.
WBT leaves records that can be analyzed and studied.

2.2 Disadvantages of WBT

WBT is not all advantages and benefits. It has costs, requires compromises, and poses serious risks. Most of these negatives can be overcome with good design-but only if you acknowledge and understand them.
1.WBT requires more work
Lacking the slick tools of CBT development and the finely honed management procedures of classroom training, WBT courses require more time and effort to design, to teach, and to take.
2.More instructor effort required
Many instructors report that electronic delivery requires 40 to 50% more effort on their part.
Many teachers using technology complain about the increased amount of time and effort such courses require of them.
Students, lacking face-to-face contact, demand more attention and feedback from instructors. Some instructors felt they had become, in effect, private tutors.
Complaints from instructors about a higher workload diminish as they gain experience. By the third course, the workload may be no more than a conventional course.
Solutions
• Invest in better tools and templates.
• Delegate duties to learners. Make them more responsible for their own learning.
• Limit contacts to official office hours when the instructor will be available electronically.
• Use professional course authors for creating courses.
3.Conversion efforts take longer than expected

Converting existing classroom courses to WBT has proven harder than many designers expected.

Designers quickly discover that the Save As HTML command in their word processor or presentation graphics program does not do the whole job. And they realize that a course requires more than electronic versions of the class overheads and handouts.

Solutions

• Perfect conversion techniques on a small pilot project of a single course or part of a large course.

• Automate the conversion process as much as possible.

• Consider redesigning the course rather than converting it.

4.More effort required by learners

Often learners report that WBT courses take 20 to 40% more time and effort than traditional classroom courses. Online discussions, brainstorming sessions, and problem-solving activities purportedly take longer than their face-to-face counterparts. Lacking the feedback of facial expressions, body language, and tone of voice, participants in online communications must spend more time apologizing for unintended insults, correcting misinterpretations, and clarifying ambiguities. As a result, learners spend less time on the matter of the discussion.

To benefit from technology, learners must use it. However, if learners feel that the benefits of the technology are not worth the extra effort required to master it, they may resist using the technology.

Solutions

• Point out benefits of learning technologies that learners may have missed.

• Teach learners how to collaborate and how to leam efficiently in WBT.

• Moderate discussions and give guidance, tips, and hints where needed.

5.Superb instructional design and production require

WBT requires superb instructional design and materials. In classroom training, a good instructor can adapt, supplement, and compensate for a weak curriculum.

Because the instructor is not present to correct minor mistakes and clear up misunderstandings, course materials for WBT must be more complete, accurate, and precise.

For IT subjects every detail needs to be correct because computers are so pedantic that if even one command is not precisely written, an entire exercise can fail. It is very time consuming to produce materials that attain this level of perfection.

Many projects fail to budget the time and detailed attention necessary to achieve this level of quality.

Solutions

• Allow time to perfect materials.

• Perform quality control testing. Conduct a beta-test class.

• Institute a problem-reporting mechanism to help identify quality defects.

• Immediately correct problems and announce availability of improved materials.

The real problems (and solutions)

1.Meanings are misinterpreted.

It is hard to tell what people mean when you cannot see their body language, gestures, and facial expressions or hear their tone of voice. Jokes become insults and subtle praise seems sarcastic, this is partially solved with software for real-time audio-video communication.

2.Who will get me unstuck?

Many learners fear that they will not be able to get help when they are perplexed or frustrated by something in the course. This feeling is exacerbated by the technical glitches, bugs, and downright complexity of some WBT software.

Solution

Provide phone or chat support.

Enable learners to help each other.

Encourage collaboration for all kinds of questions and issues.

This is solved with quality remote-controlled software.

3.Solo learning Is lonely.

Learning by yourself can seem cold and sterile to some. (Yet others prefer learning alone.) Some need the interaction, competition, and social pressure of a class to motivate them.

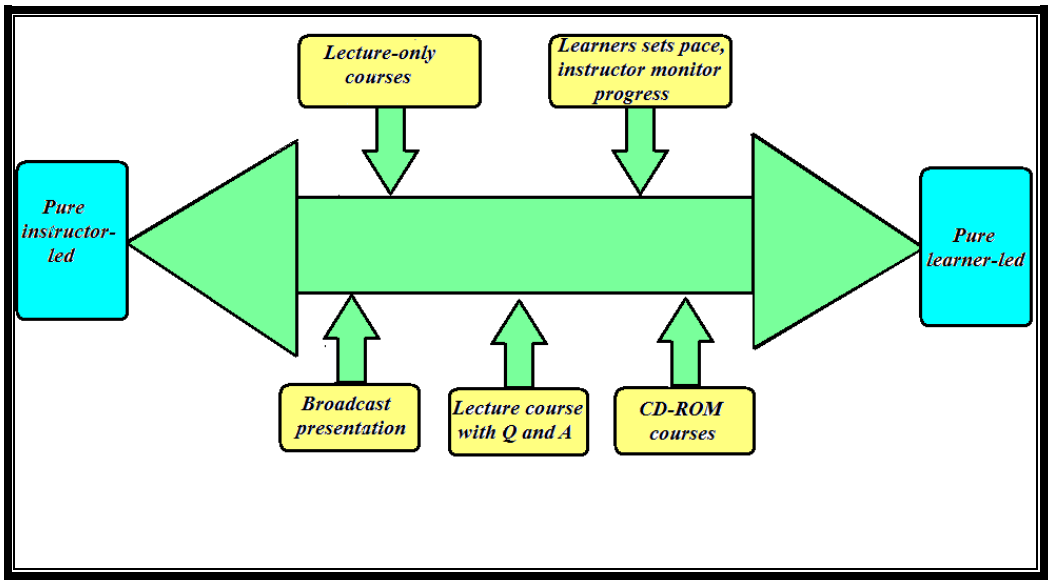
Solution

-Provide access to a facilitator at any time.

-Implement discussion groups and chat sessions.
-Publish a schedule with deadlines.
-Conduct team activities.

3 TECHNICAL REQUIREMENTS ARE DIFFICULT TO MEET

Some of the most formidable barriers to WBT are technical. Many learners never get started because they cannot get the course to display in their browser. Even when they do get started, technical glitches make for a frustrating, stressful experience. Little is learned except that WBT is no fun.
Many Web-based courses are "dead on arrival." That is, learners never get started because they cannot meet the technical requirements for the course, from that reason, by author`s opinion, unnecessary and complicated software should be avoided, whereas usage of simply and accessible software is encouraged. Many potential learners just say, "This is too much trouble. I give up."
Even minor technical glitches can interrupt progress and thwart learning. Long download times, temporarily unavailable pages, and browser crashes can plague even the best system.
Promises of 24 x 7 availability are seldom met in practice. The server sometimes has to be shut down for maintenance or to transfer the course to another server. It is hard to have backups for every component.
A complex course may rely on multiple servers for Web pages, for e-mail, for forums, for chat, for uploading and downloading files. Not all of them may be working all the time.
Having to deal with unfamiliar and not entirely reliable technology may subject learners to additional stress and distractions. As a result, they spend less time on the subject matter of the course, so their time is used less effectively.
Technical difficulties pose such a serious problem that we have to pay attention to them!
WBT can distort learning
1.Too many disruptions
Many learners find it is hard to learn at the office or at home because of the constant interruptions.
• Make lessons and topics shorter.
• Show learners how to bookmark lessons.
• Suggest setting aside learning times and hanging a "Do not disturb" sign on the door2.
Web is distracting
The Web is seductively distracting. Undisciplined learners can get sidetracked into exciting forays that, though pleasant, contribute little to the goals of the course.
• Make your Web pages cover most of the screen.
• Include few external links and put them at the ends of lessons.
• Publish and enforce deadlines.
3.Computer as authority figure
Many Internet sources undergo no critical review process and are little more than unfounded opinions. Some learners may not be aware of this limitation. By the rule, better computer configuration have to be used.
• Warn learners of the variable quality of Web sources.
• Have learners compare contradictory sources.
• Conduct a scavenger hunt for contradictions and nonsense.Instructor-led or learner-led?
One of the first and most important decisions facing designers is the role (or lack of a role) for an instructor. WBT does not eliminate the value of an instructor.
The teacher's role in coaching, observing learners, offering hints and reminders, providing feedback, scaffolding and fading, modeling, and so on, are powerful enhancements to any learning situation.
However, WBT gives us choices as to who leads: the instructor or individual learners. This choice is not limited to pure instructor-led or pure learner-led forms but includes a spectrum of possibilities in between these two extremes, as shown here:



Sch 1. Presentation-lectures type

The choice is not between pure instructor-led and pure learner-led training, but rather a range of possibilities between these two extremes. Pure instructor-led training is limited to short events such as broadcast presentations. Most so-called instructor-led training allows learners some freedom to pursue optional topics and to schedule their own time between instructor-scheduled events. As we move toward the learner-led end of the spectrum, the role of the instructor fades to that of a facilitator-on tap but not on top. The instructor's role can become that of just another learning resource that learners can summon at a mouse click. Pure learner-led WBT courses do exist and resemble stand-alone disk-based CBT.

Both instructor-led and learner-led training offer advantages:

Advantages of instructor-led training

• The instructor can answer questions and solve problems as they arise.

• Instructors provide authority that some learners may need for motivation.

• An instructor can adjust the course to suit the needs of a particular class.

• Instructors can grade activities and tests too subtle for automated scoring.

• Instructors can sympathize, empathize, urge, cajole, and inspire learners.

Advantages of learner-led training

• Learners develop self-reliance they will need after the class.

• Learners are not required to conform to the instructor's schedule.

• Instructors add substantially to the cost of delivering courses.

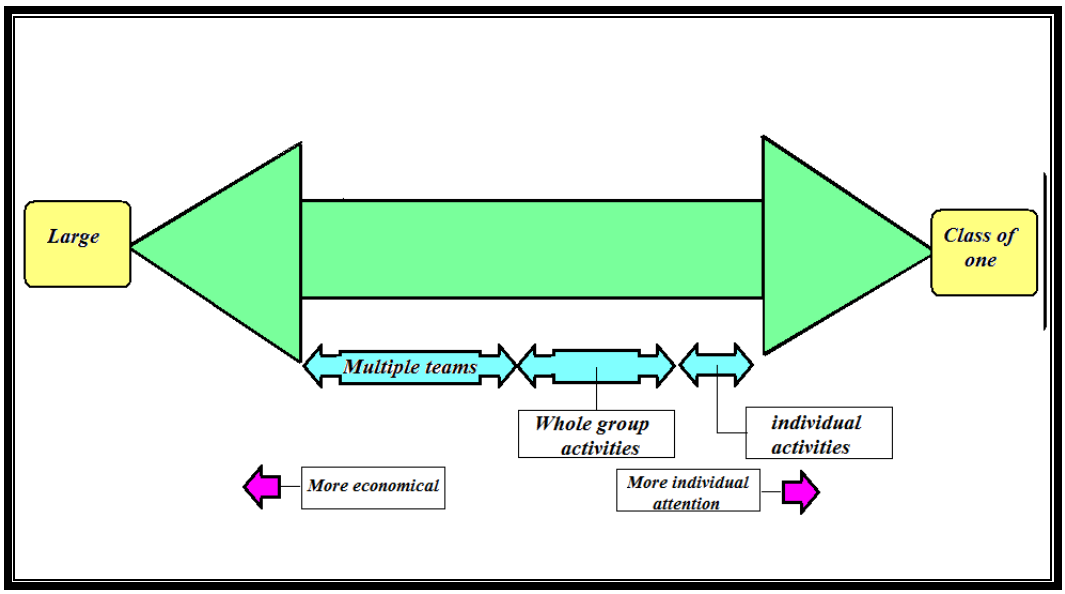
• All learners get the same quality of learning experience.

• Learners appreciate the anonymity and privacy.

Many WBT courses deliberately shift from instructor-led to learner-led during the progress of the course. The course starts with the instructor firmly in charge, setting the pace, making assignments, presenting information, and grading results. As the course progresses, the instructor's role fades, with the instructor's responsibilities being taken up by teams and eventually individuals. By the end of the class learners are prepared to apply their learning alone.

What size class?

In WBT a class is a group of individuals learning the same material on the same schedule. Unlike classroom training, the size of a WBT class is not constrained by physical architecture but by decisions of the course designer and by accessible techniques



Sch 2. Scheme of group size

While larger classes are more economical, they provide learners with less individual attention. The class size also affects the possibilities for collaboration. With very small classes, most work must be done by individuals. With moderate class sizes, say up to 30, the class as a whole can participate in activities. In larger classes, learners must be divided into teams. Clearly the size affects the design of activities and other course materials.

4. MAKE YOUR ACTIVITIES WORK BETTER

Two instructional designers each create an activity to teach a concept. In both activities the learners perform the same actions. Yet one activity works much better than another. Why? Often the success of an activity depends on more than what actions are assigned to learners. It also depends on how the activity is designed-that is, how clearly it is organized, how it is presented to learners, how their actions are guided, what external resources are used, and how the instructor's workload is managed.

1.Select appropriate activities
2.Provide complete, clear instructions
3.Simplify activities
4.Give hints
5.Design entry forms to structure thought
6.Use the Internet as a source of material
7.Choose accessible remote-control software

How do you need to communicate?

Who will send messages to whom? What message routing schemes (topologies) do you need?

One to one-In one-to-one or private messaging, only the
sender and the receiver have access to the message. This scheme is like a telephone conversation (two-way) or a private letter (one way).

Broadcast- messaging enables one person to send a message to everyone else. Typically this scheme is used by the Instructor for making announcements to all learners in the course.

Some-to-some-In a some-to-some routing scheme everyone can send messages and everyone can select which messages they receive. This is like a bulletin board where everyone can post notes but no one need read more than catch their eyes.

All to all-In all-to-all messaging everybody receives every message sent by

everybody. This is like a roundtable meeting where everybody hears everything said by everybody else.
These routings are just the simplest and most common forms. Most real activities combine several modes. For example, a question-and-answer session begins with a broadcast requesting a question. This is followed by the transmission of the question in a one-to-one mode, which is finally followed by broadcast of the question and its answer.
How to Simplify and integrate technology- Once you have chosen the technologies to use in your course, determine how to provide these technologies so they do not overwhelm learners with unnecessary complexity. Simplify technologies. Adopt tools that package multiple capabilities behind a single, simpler user interface. Integrate tools right into Web pages. Also consider creating a custom installation program to simplify the process of acquiring and setting up the necessary tools.
1.Pick multipurpose tools
2.Integrate tools into the page
3.Create an Integrated installation program
4.Do not tempt fate

5. CONCLUSION

Conclusion can be made, based on derived from facts, that ICT are not more just future but also a necessity. All of the advantages of WBT, access to Web-based resources, centralized storage and maintenance, collaboration mechanisms, enables better teaching techniques, point out to necessity of implementation of these technologies but with a certain competent and quality preparation. We are bound to this conclusion by given disadvantages of WBT, it has costs, requires compromises, and possess serious risks. Most of these negatives can be overcome with good design-but only if you acknowledge and understand them. WBT requires more work, More instructor effort required, Conversion efforts take longer than expected, More effort required by learners, Superb instructional design and production require. The technologies of WBT are well suited to structured technical knowledge. As tools and technologies of WBT are made easier to use , more people will use them in more environments for more subjects.
When we consider CNC technologies, author`s experience points out that present technological level and available resources all enable successful implementation of trainings of CNC machines programming without larger obstacles. However, regarding the training of CNC management and control, present technological level and resource equipment distinguish certain disadvantages, thus, conclusion can be made that remote-training process, regarding CNC machines managing and control on particular place of training process – near machine, request presence of specially trained CNC machine operator also by the presence of instructor which is dislocated.
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