APPENDIX A: Bibliography of Key Sources

1. APTA Research Plan Task Force. "A Research and Technology Strategic Plan for the American Public Transportation Association: A Report and Recommendation to the APTA Executive Committee." August 2001.

2. Carr-Chellman, Alison and Philip Duchastel. "The Ideal Online Course." *British Journal of Educational Technology*, Vol. 31, No. 3, 2000.

3. Davis, Mary J. (Principal Investigator). *TCRP Report 77: Managing Transit's Workforce in the New Millennium*. TCRP Project F-09. Transportation Research Board of the National Academies, Washington, DC (2002).

4. Delahoussaye, Martin and Ron Zemke. "Ten Things We Know for Sure about Learning Online." *Training:* September 2001; pp. 49–59.

5. Driscoll, Margaret. "Ten Things We Know about Teaching Online." *Teaching Online: Technology for Learning Newsletter*. Lakewood Publications: Vol. (No 1.), 4-5, 2000.

6. Driscoll, Margaret. *Web-Based Training* (2nd edition). San Francisco: Jossey-Bass Inc., March 2002.

7. Driscoll, Margaret, and Larry Alexander (Editor). *Web-Based Training: Using Technology to Design Adult Learning Experiences.* San Francisco: Jossey-Bass Inc., July 1998.

8. Driscoll, Margaret. "Myths and Realities of Using WBT to Deliver Training Worldwide." *Performance Improvement Journal:* Vol. 38, No. 3, March 1999.

9. Finegold, David, Marc Robbins, and Lionel Galway. *TCRP Report 29: Closing the Knowledge Gap for Transit Maintenance Employees: A Systems Approach.* TCRP Project F-05. Transportation Research Board of the National Academies, Washington, DC (1998).

10. Horton, William K. *Designing Web-Based Training.* New York: John Wiley and Sons, November 1999.

11. Kiser, Kim. "The Road Ahead: State of the Industry 2001." *Online Learning Magazine,* October 2001.

12. McCrea, Fred, R., Keith Gay, and Rusty Bacon. "Riding the Big Waves: A White Paper on the B2B eLearning Industry." Thomas Weisal Partners, January 18, 2001.

13. Stellin, Susan. "Business to Business; Employee Training, Without the No-Doz." *The New York Times,* April 18, 2001.

14. Wiggins, Sterling, and Brian Moon. TCRP Project A-20B (2), "Training for New Technology," Klein Associates, Inc. Report publication pending panel review.

15. Zimmerman, Carol A., John L. Campbell, and Christopher Cluett. *NCHRP Synthesis 296: Impact of New Information and Communication Technologies on Transportation Agencies.* NCHRP Project 20-5, Topic 31-08. Transportation Research Board of the National Academies, Washington, DC (2001).

APPENDIX B: Contact Information for WBT SMEs

Name and Title	Affiliation(s)	Contact Information	E-mail and Webpage
Anderson, Mark Manager of Training	San Diego Transit	San Diego Transit 100 16th Street San Diego, CA 92101 619 238 0100 (v) 619 696-8170 (f)	Mark@transitnet.com
Brahms, Thomas	Institute of Transportation Engineers (ITE)	ITE 1099 14th Street, NW Suite 300 West Washington, DC 20005 202-289-0222 (v) 202-289-7722 (f)	tbrahms@ite.org http://www.ite.org/
Davis, Mary J., PHD President	McGlothin Davis, Inc.	McGlothin Davis, Inc. P.O. Box 390774 Denver, CO 80239 303-371-4192 (v) 303-371-4776 (f)	worldofw@aol.com http://www.mcglothindavis.com/
Fletcher, Dennis Director, Transit Studies	ENTRA Consultants	Markham Office 2800 Fourteenth Ave. Suite 210 Markham, ON L3R0E4 905-946-8900 (v) 800-959-6788 (v) 905-946-8966800 (f)	djf@entraconsultants.com http://entraconsultants.com/ http://www.entraconsultants.com/ENTRACVs/CVDJF0121.pdf (profile)
Frankle, Kathleen Program Manager	Center for Advanced Transportation Technology, University of Maryland	Myers Building #806 Room 3103 College Park, MD 20742 410-414-2925 (v) 301-403-4591 (f)	kfrankle@chesapeake.net http://www.cee.umd.edu/prog/trans.html
Giguere, Ronald PCB Coordinator	ITS Professional Capacity Building Program, Joint Program Office, USDOT	USDOT - JPO 400 7th Street, S.W. Washington D.C. 20590 202-366-2203 (v) 202-493-2027 (f)	Ron.Giguere@fhwa.dot.gov http://www.pcb.its.dot.gov/web_based.asp
Moon, Brian Research Associate	Klein Associates, Inc.	1750 Commerce Center Blvd. N. Fairborn, OH 45324 937-873-8166, ext. 120 937-873-8258	brian@decisionmaking.com http://www.decisionmaking.com

Name and Title	Affiliation(s)	Contact Information	E-mail and Webpage
Ruddick, Scott Manager, Education and Training	Canadian Urban Transit Association	55 York Street Suite 1401 Toronto, ON M5J 1R7 416-365-9800 e102 416-365-1295	ruddick@cutaactu.ca http://www.cutaactu.ca www.transittraining.com (V-Campus)
Schweiger, Carol L. Principal	Multisystems, Inc.	10 Fawcett Street Cambridge, MA 02138 617-864-5810 (v) 617-864-3521 (f)	cschweiger@multisytems.com http://www.multisystems.com/consult/index.htm
Steiger-Howe, Linda Program Director, Technology Transfer Program	Institute of Transportation Studies, Technology Transfer Program UC, Berkeley	*To be completed.* 510-231-5678 (v) 510-231-9459 (f)	lkhs@uclink.berkeley.edu http://www.its.berkeley.edu/techtransfer/
White , Chelsea C. III, PHD ISyE Professor of Transportation and Logistics	The Logistics Institute, School of Industrial and Systems Engineering, Georgia Institute of Technology	Georgia Institute of Technology 765 Ferst Drive, NW Atlanta, GA 30332 404-894-0235 (v) 404-894-2301 (f)	cwhite@isye.gatech.edu http://tli.isye.gatech.edu/

APPENDIX C: SME Survey Outline

Objectives / Promise

1. How important is training to the future health of the transit industry? (Use a scale from 1 unimportant to 5 extremely important.)

2. Do you think WBT can help meet the training needs of the transit industry? (Use a scale from 1 definitely not to 5 definitely yes)

3. What subject areas and skill sets in the transit industry are most likely to benefit from the WBT approach?

4. I am going to list several areas of transit content, and ask you how well and why you think WBT can help teach that content. I would like you to rate each in terms of how effective WBT could be, on a scale from 1 to 5, where 1 = WBT would not work well to 5 = WBT could be extremely effective:

   - Training in transit customer service techniques and procedures
   - Training in transit operations and planning
   - Training in operating or maintaining equipment

5. Next, I am going to list several different staff levels in the transit industry. Again, I would like you to rate each in terms of how effective WBT could be, and why, with that level of staff:

   - Executive/ management personnel
   - Supervisory personnel
   - Technical personnel
   - Line staff and operating personnel

6. For the transit industry, what are the potential advantages and disadvantages of each of the types of WBT listed on the Transit Training Resource Web page we created (explain if needed):

   - Web/ EPSS
   - Web/ CBT
   - Web/ asynchronous virtual classes
   - Web/ synchronous virtual classes

7. After reviewing the information on WBT, what do you see as the most important differences between WBT and more traditional transit training?

8. How much do you think WBT can improve on CBT and why?

9. Do you think WBT can help with employee recruiting, retention, advancement?

10. When do you think the presence of a human trainer is required or advantageous, either for traditional training or WBT?

11. When should courses be self-paced and when is it better to follow a set schedule?

12. Under what conditions do you think that the advantages of WBT will outweigh the advantages that come from face-to-face meetings with an instructor?

13. Do you think that WBT will make it easier to transfer training knowledge to on-the-job knowledge (i.e., eliminate the 2-day gap from training setting to office setting)?

14. Some WBT programs are expensive to develop. Under what conditions, if any, would you think it would be worth investing significant up-front costs?

15. Under what conditions, if any, do you think transit agencies might realize cost savings from investing in WBT?

16. To teach and test transit competencies, do you think Web-based training can be as effective as in-person training programs? (Use a scale from 1 definitely not to 5 definitely yes.)

Value Creation

17. From your experience working with the transit industry, what would you say are some of the main barriers to transit training (travel, time, cost, effectiveness, quality, follow-up)?

18. Which of those barriers are most likely to be mitigated using WBT?

19. In what ways do you think the flexible "any time, any place" nature of WBT could be useful for transit training?

20. Do you have any other ideas on how WBT could maximize its value to the transit industry?

21. Of the "Transit WBT courses" links on our Transit Training Resource Web page, are there any, or any types, which you think should be expanded and/or promoted or publicized?

22. Of the "Other WBT Courses," are there any courses which you think should be made available to the Transit community?

23. Are there additional links/resources that you would like to see on the Web page? What will they add?

Implementation Issues

24. Do you think most transit workers would want access to WBT at work, at home, or both? Why?

25. From your experience working with the transit industry, roughly what percentage of the industry has Internet access at the office?

26. In transit offices, do you think most people have high-speed Internet connections or dial-up connections? How important is it that students have high- speed Internet connections to have a good WBT experience?

27. From your experience working with the transit industry, would you say that most people have speakers on their computers at the office?

28. Generally, how do you think transit employees will react to WBT, on a scale from 1 very negative to 5 very positive?

29. How do you think transit managers will react to WBT, on a scale from 1 very negative to 5 very positive? Why?

30. Approximately what percentage of transit workers would need basic computer/Web training before they could take WBT courses?

31. What would be the most important factors in trying to insure the success of a WBT program?

32. What do you see as the top obstacles/traps that transit officials should be aware of when considering WBT?

33. Do you have any other comments, suggestions, or recommendations on WBT and its potential for the transit industry?

34. Are there others in your field with whom you recommend we speak regarding WBT in the transit industry?

APPENDIX D: Tally of SME Responses to Scale Questions

Participant No.	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	Avg.
1: Importance of training to transit	5	5	5	5	5	N/A	4	5	4.5	5	4	4.8
2: WBT meet transit training needs	4	5	5	4-5	5	4	4	5	N/A	5	5	4.7
4a: Customer service	3	4	4	3	5	N/A	5	3.5	N/A	5	3	3.9
4b: Operations & planning	5	5	4	3	5	5	N/A	5	N/A	5	4	4.5
4c: Equipment	2	5	4	3	5	N/A	5	2	N/A	5	4	3.9
5a: Executive / management	3	5	5	2	4	4	2	N/A	2	5	3	3.5
5b: Supervisory	4	3	3	2	5	4	5	N/A	3.75	5	4	3.4
5c: Technical	5	4	3	3	5	N/A	5	N/A	5	5	5	4.4
5d: Line staff / operating personnel	4	3	4	2	5	N/A	5	N/A	4.5	2	5	3.8
25: % of staff with internet access	100% high speed	100	75	N/A	95 office	Most	67.5	Almost all	Pretty high	30%	95%	80%
27: Staff with speakers	95	100	75	100	N/A	N/A	Most	10	N/A	Almost none	50%	72%
28: Transit employee openness to WBT	4; exciting but intimidating	Depends on demographics	2	4	3	N/A	4	2.5	3.5	5	4	3.6
29: Transit manager openness to WBT	4	3	N/A	2	3	4	2	4	4	5	4	3.5
30: Need basic computer training	N/A	Depends on demographics	10	N/A; not high	70	Not many	0	15	Slim to none	About 32%	70%	33%

APPENDIX E: Summary of Responses to Selected SME Telephone Survey Questions

(Each number question corresponds to the question in Appendix C.
Lettered responses correspond to the same SME)

3. What subject areas and skill sets in the transit industry are most likely to benefit from the WBT approach?

    A. Computer-related skills

    B. Cognitive functions, day-to-day technical or mechanical

    C. High level policy courses for managers and decision makers

    D. Professional/managerial, some technical/mechanical

    E. IT, maintenance

    F. Management level for decision making

    G. Safety training, theories like fundamentals of operations or troubleshooting basic equipment, but practice (driving) must be hands-on

    H. Transit planning, transit scheduling, employee performance measuring & monitoring, transit system performance measuring & monitoring

    I. N/A

    J. General knowledge, scenario-building, software training

    K. IT and software, and management issues

6. For the transit industry, what are the potential advantages and disadvantages of each of the types of WBT listed on the Transit Training Resource Web page we created?

    A. EPSS for maintenance personnel, synch classes best

    B. EPSS good as collection of residual staff intellect, they mostly use asynchronous classes

    C. EPSS needed, CBT good for self-motivated students but must be updated, synchronous good but scheduling problems remain

    D. EPSS has highest potential, CBT good for some courses, asynch good for those who control own schedules & if can find committed instructor, synch best for technical workers and line personnel whose supervisors control their schedules

    E. EPSS outstanding versatility, CBT for motivated individuals, asynch good but expensive to find dedicated instructor to be hands-on around the clock; synch can be difficult if class size too big

    F. Synchronous is their only experience, enables people across properties and organizational levels to share perspectives; facilitator helps balance engagement and intimidation due to technology

    G. EPSS high potential for specific knowledge, i.e., systems knowledge ("bus door locks") for mechanics, utilize expertise of veterans on job; employees who work independently (supervisors, night shift, drivers) enjoy their CBT for customer service, safety (defensive driving), radio operations; asynch good for planning/marketing courses for self-motivated executives, synch better for office staff

    H. EPSS useful for basic info "transit algebra;" CBT requires more content to make up for lack of class interaction; asynch they use with chat rooms and record all sessions; synch = more flexibility with content, but reliance on getting people same place same time

    I. EPSS good reference tool but not only training experience, too boring; CBT good because learn at own pace, but no interaction and difficult for those who are not self-motivated; asynch overall pretty good, get

flexibility of self-pace with structure of some deadlines; synch good because of immediate instructor feedback and student interaction, but scheduling/coordinating demands

J. EPSS high mark if useful, relevant info, CBT easy access, self-pace good if developed well, asynch can stall student pace so tutor option better, synch frustrating & rarely done well

K. EPSS good reference tool but not for novice; CBT lack of human contact is a disadvantage; asynch most practical for effectiveness and flexibility, synch most effective but scheduling tough

7. After reviewing the information on WBT, what do you see as the most important differences between WBT and more traditional transit training?

A. Taking person out of work environment for training

B. WBT eliminates barriers: travel & scheduling; is more effective for retention, students can learn at own pace, stop, re-start, go back to info

C. With WBT you lose networking opportunities of traditional training, which is 80% of the value, lose interactivity

D. WBT provides economies of scale; increased access both geographically and in terms of enabling small agencies to participate

E. WBT provides flexibility and versatility, designers forced to identify core competencies early on rather than rely on instructor to communicate them

F. N/A

G. Level of interactivity, interest & retention high and overall cost low; repeated access to same material for many, easy record-keeping

H. Lack of immediate interaction with WBT; but lower cost, increased access and flexibility, time to plan class decreases

I. Flexibility, cost effectiveness

J. Cost effectiveness of getting training out to broadest audience, enable them to take it whenever they can without taking away from daily functions/service to customers

K. Geographical footprint is bigger with WBT; express delivery to many people dispersed in many locations, but classroom probably still better for learning

8. How much do you think WBT can improve on CBT and why?

A. N/A

B. CBT is a dead instructional tool, experiment that failed; hard to update, 1-way passive info flow is ineffective

C. WBT provides more flexibility in updating info, which is important for transit

D. WBT is easier to update, but slow or bad connections and lack of access can be issues

E. CD is convenient, easier to access but more difficult to update

F. Facilitator and student interaction in WBT is something that could never be done 1-on-1 with a computer

G. Totally different; access/IT issues & limitations with WBT, can distribute CDs and know most people have drive, don't know who has connection to internet; but for simple safety course with record keeping, WBT better

H. Increased opportunity for student interaction with WBT; important as content is only the jumping off point for learning

I. WBT enables immediate updates accessible to everyone right away, plus links to operation centers, etc., useful to training

J. Both have place; WBT great for tracking student progress, but CBT great for those without Web access or who want to take it with them and do on the go.

K. WBT can use greater bandwidth and do more, but need that connection, which is a constraint now but won't be in 2 years

9. Do you think WBT can help with employee recruiting, retention, advancement?

A. Yes, but not sure about recruiting

B. Yes, increased learning opportunities mean increased retention, skills to succeed, and advancement

C. Yes, training in general increases retention; they're developing certificate programs that offer perks to encourage advancement

D. Yes, by committing to WBT, agencies show employees they're committing to the best tools for technology for them and for the industry

E. Yes, employees want best tools for advancement; want to move up and aging Gen X wants to continue to learn

F. N/A

G. It could; would be neat to encourage prospective employees to get licenses and do prerequisite training via WBT before they start

H. Managers are happy to give training time and experience to employees to increase their job confidence and skills

I. Yes, for advancement; WBT can centralize process of moving up in an organization, also good for retention as employees will be able to see the move up the ladder

J. No; wouldn't hang these 3 on 1 kind of training; employees assume employer will train; any time can backfire, seem like encroachment on out-of-work time

K. Retention, yes, giving employees opportunity to increase their intellectual capital, which does link to advancement

10. When do you think the presence of a human trainer is required or advantageous, either for traditional training or WBT?

A. When skill set entails human interaction

B. Always, to answer questions

C. Any time you are promoting the exchange of ideas; for software training WBT with 2 people at a terminal is best

D. For complex material or material dealing with human interactions

E. For high level skills, and when human interaction is part of material

F. Always (with reference to his project); user could not go through experience without facilitator

G. Blended best; modules + discussions, role playing, equipment demos

H. Required, no, advantageous, yes; "trainer" can also apply to other students

I. For changing, subjective material requiring critical analysis of situations with "what if" variables

J. For top tiers of training "pyramid"; to teach specific subjects by SMEs who stimulate and answer more thought-provoking questions

K. Always helpful to have people to help us learn; WBT is best when it can simulate that experience; give sense of group learning experience.

11. When should courses be self-paced, when is it better to follow set schedule?

   A. Depends on application; critical job skills training must be scheduled

   B. Formal training with activities and exercises to learn particular skill sets should be scheduled; self-paced for high-end help & class follow-up

   C. Self-paced always is their model now; if they find it fails they will adjust model

   D. Depends on learner; self-paced when there is high motivation level

   E. Set schedule when learning is sequential & builds lesson to lesson; when you must learn one thing in order to learn the next thing

   F. Always set schedule, though length of program varies depending on in-class discussions

   G. Self-paced whenever possible for concepts/skills that don't require practice, except for planning/marketing or material requiring exchange of concepts & ideas.

   H. Some content better if not spread out over 8 weeks, but not sure what specific content

   I. Long, intensive courses should be scheduled; combo of scheduled and self-paced activities works best; w/out deadlines only 50% complete training

   J. Depends on student and environment; good to give student and supervisor responsibility of setting deadlines and meeting them independently

   K. Both good

12. Under what conditions do you think that the advantages of WBT will outweigh the advantages that come from face-to-face meetings with an instructor?

   A. To teach technology tools

   B. When you can create a team-based, classroom atmosphere virtually

   C. For high level policy courses or WBT that promotes agency initiatives

   D. When face-to-face can't happen WBT is more current and can draw from the expertise of several people

   E. When teaching a linear process (and can be scheduled), or for background or basic info to accompany classroom training

   F. Advantage always of getting highly diverse experience with WBT, very costly to get same number and variety of experts in one place

   G. Technology only way to bridge gap between unchanging money for training, and increased need for training a) more regulations legislators require and b) basic skills such as English

   H. Depends on students; WBT ideal for people less able to prepare something to say and say it in class; they can sit back and take time to compose/edit comments

   I. When you must train many people on the same material; if employees are scattered and only a few in each place; if org can't afford to have employees out of office at training; if have same type of training over and over among a staff with high turnover or rapid expansion such as toll takers

   J. When you have many dispersed people who are hard to gather, and who need to have the same knowledge base

   K. When WBT incorporates human connection somehow, advantages to it will grow

13. Do you think that WBT will make it easier to transfer training knowledge to on-the-job knowledge (i.e., eliminate the 2-day gap from training setting to office setting)?

    A. Only if good content; need follow-up access to info

    B. Yes; WBT has a much higher retention rate

    C. Probably, because people can always go back to material as needed

    D. Hard to say; traditional "gap" could provide study opportunity, doing WBT in office has many distractions like phone, visitors

    E. Depends; if content good, yes, WBT eliminates intimidation factor of being in classroom, no need to "hide" and not participate

    F. Yes; students play their game in context of their actual agencies and job experiences

    G. Yes, if information is specific to transit or agency, i.e., "our busses"

    H. Yes; info always there, can apply info you learn from day 1, like running back to office at lunch break at traditional training session to apply what you just learned

    I. Not necessarily easier, but different; easier for trainer who can rely on WBT to teach some things and s/he can spend less time away from regular job/duties

    J. Yes; can provide exposure to knowledge base and enable people to apply it to material they know; WBT gives them knowledge and practical understanding of its application

    K. Absolutely, especially if you can tailor the content to participants' job or a project they're working on

14. Some WBT programs are expensive to develop. Under what conditions, if any, would you think it would be worth investing significant up-front costs?

    A. High up-front investment will ensure high quality WBT

    B. Overall cost of WBT not necessarily high; traditional training has hidden costs, if content helps staff excel at work, worth it

    C. Up-front cost is <= cost of traditional training because delivery is cheaper and can reach 2-5 times more people

    D. If there is a high need to improve job performance, for procedures training and material updating WBT has higher ROI

    E. For repeated training for many people of core competencies in which principles don't change

    F. Theirs not so expensive to develop or operate, investing in their WBT means maximizing investment in technology being trained

    G. Need to do cost analysis; if it's an easy subject on which many people must be trained, it's worth it; if complicated subject for few, no

    H. Developing custom WBT for individual agencies maybe not appropriate; better for orgs like APTA, CUTA and NTI to sell as service or member benefit

    I. If you must train many people scattered about or can't afford to have employees away; must have significant number of people to train to make WBT cost effective

    J. Several people scattered; cost of face-to-face can be high; cost of WBT development does not have to be if work with SMEs and ISD experts

    K. Federal agency can help; National Science Foundation or FTA can help fund WBT development

15. Under what conditions, if any, do you think transit agencies might realize cost savings from investing in WBT?

A. Cut travel costs

B. Small agencies will be able to afford training with no travel or away-from-work costs, effective WBT means job performance improvement

C. See #14.

D. Not cheaper, but costs are different. EPSS effective for computer training, can be more efficient, accessible format of big manuals, enable collaboration among agencies

E. Economize on trainer resources; train more people with same material, limit trainer role & avoid burnout, retain best staff

F. Using their WBT will enable people to implement transit technologies more smoothly; increasing efficiency = cost savings in long run

G. Major savings in employee time and associated costs; if you can save 4 hours of class time, can save $150,000 in costs including paying someone to cover trainees' time; can train more people over and over

H. More a matter of getting more out of WBT with same money; training budgets won't go down but number of employees trained will go up; expenditure more on developing training than on travel

I. WBT requires less labor and time to teach and update, so once it's in place the lower expenditure of resources makes up for the high upfront costs; traditional training usually entails one person at a time as they are hired, which requires a lot of supervisor/trainer time, and employee time away from regular task

J. If transit agencies can work together to share resources and WBT

K. Trainees spend less time away from work, and have fewer travel expenses. Combined with performance improvement, this adds up to cost savings.

17. From your experience working with the transit industry, what would you say are some of the main barriers to transit training (travel, time, cost, effectiveness, quality, follow-up)?

A. Cost & time investment, quality, effectiveness

B. Travel, time, cost, effectiveness, quality, follow-up, time away from work

C. Ability of people to leave work to attend training, travel, cost of updating training materials

D. Cost; a small percentage of the budget is allocated to training.

E. Effectiveness, quality, follow-up; no measure of what is learned in training or if units more effective as result

F. Failure to properly identify scope of training project

G. Increased need for more and more basic training, but no more resources are allocated to training

H. Travel, time, cost

I. People can't leave office/miss work to attend training; lack of travel budget; training budgets in general always first to get cut

J. Cost in terms of loss of productivity and difficulty of getting people together for training

K. Travel time, cost, time away from the job, effectiveness.

18. Which of those barriers are most likely to be mitigated using WBT?

    A. Travel, follow-up

    B. All; more effective, better QC, no instructor fumbles or personality clashes in classroom to negatively impact training

    C. Updating material is easier, eliminate travel expense and hassle

    D. None. Incorporating WBT will be perceived as adding a line into the budget, not subtracting one.

    E. All mentioned above, if content is good and a tracking mechanism is built in

    F. Their game helps decision makers about training do their jobs better & with higher awareness of decision making process/ factors

    G. Time; can provide more training in less time

    H. Travel, time, cost

    I. All of the ones cited in previous answer

    J. Both (cost/loss of productivity & brining people together)

    K. Travel time and cost, if the WBT content is of the same quality as traditional training

19. In what ways do you think the flexible "any time, any place" nature of WBT could be useful for transit training?

    A. Eliminate time and hassle of planning a training session

    B. Training can be done on or around normal work shifts, and provide national and international access

    C. This is the major selling point of WBT

    D. Most useful aspect of WBT; EPSS integrates training into workday, leads to direct job performance improvement

    E. Helpful because now training only happens when there is a group big enough to justify the expense; WBT can provide different levels of training simultaneously

    F. Enables managers to fit WBT class schedules to people's schedules, not people's schedules around far away training classes

    G. Can work training around other requirements (road tests, etc.), things move more quickly to get employee up and running

    H. If course content & format clear, WBT can address different needs of different students

    I. WBT eliminates the barriers to training cited above, (i.e., makes training more viable for agencies with small budgets/few resources)

    J. More accessible, people can do it at work or home, from office lunch room or break room, or set learning station

    K. The centralized nature of WBT makes it tremendously useful for transit

20. Do you have any other ideas on how WBT could maximize its value to the transit industry?

    A. Blended approach

    B. Must be thought of formal structured learning; knowledge management improves community communication and provides vehicle for pooling intellectual capital

    C. Must convert people so they're not intimidated by WBT, when this is done in 5-10 years, WBT value will be maximized

    D. WBT can enable collaboration among agencies on training initiatives

    E. Use WBT to communicate transit best practices

    F. WBT enables people to share knowledge across the industry; when it can do that, great

    G. Have employees do WBT on own time with compensation, info share among agencies

    H. No

    I. No

    J. Have right people developing right material in most effective manner; knowledge base developed by SMEs and assessment tools by ISD experts

    K. Convince people that the quality of knowledge shared and evaluation mechanism have impact equal to classroom training

21. Of the "Transit WBT courses" links on our Transit Training Resource Web page, are there any, or any types, which you think should be expanded and/or promoted or publicized?

    A. Move "other" list to first page, except IECT

    B. No

    C. NTI

    D. All

    E. CUTA seems most developed

    F. No

    G. No

    H. No

    I. No

    J. NA

    K. NA

22. Of the "Other WBT Courses," are there any courses which you think should be made available to the Transit community?

    A. No

    B. No

    C. No

    D. No

    E. No

    F. No

    G. No

H. No

I. No

J. NA

K. NA

23. **Are there additional links/resources that you would like to see on the Web page? What will they add?**

A. NHI's

B. Chat rooms and discussion forums to create a virtual community

C. www.pcb.its.cot.gov

D. No

E. Links to community colleges will enable transit employees to learn about and enroll in online courses

F. www.decisionmaking.com -- will probably be available through an agency already on site eventually

G. No

H. ASTD, online learning magazine, training magazine to provide more info on WBT

I. Intro to page and mission statement because page is not self-explanatory, and all the links could be intimidating; link to ITE site

J. NA

K. NA

24. **Do you think most transit workers would want access to WBT at work, at home, or both? Why?**

A. Work

B. Both

C. Their ideal is learning lab away from office (but not at home)

D. Both

E. Work

F. Work

G. Both, but with compensation from home

H. Both

I. Both

J. Both

K. Work

26. **In transit offices, do you think most people have high-speed Internet connections or dial-up connections? How important is it that students have high- speed Internet connections to have a good WBT experience?**

A. Important; most probably don't have

B. Essential for WBT with features requiring more bandwidth

C. 50% do; high speed connection helps but they design for low end and will for next 2-3 years

D. Depends on urban/rural location; important for WBT using video and complex graphics

E. Don't know %; important for efficiency but if dial-up is only option, better than nothing

F. Many have high speed access, not important for their game as it's slow moving with no flash

G. Don't know; good connection very important depending on level of interactivity, record keeping, video and drag-and-drop use

H. Not really important for his course; they keep it simple, can dial up into chats from home

I. Probably most at work have T1 and dial-up at home; very important for good experience because people don't want to sit and wait for a long time for something to load up

J. Differs; big properties, yes, small, no. Can develop good WBT for 40 or 56K connections

K. Don't know; imagine most have dial-up. High-speed connection very important for good WBT experience.

31. What would be the most important factors in trying to insure the success of a WBT program?

A. Promote, have solid content, high-speed access

B. Don't compromise content and quality for technology; training must hit workplace need & adhere to sound adult learning principles

C. Put out quality products and support them; high quality programs updated often

D. Define scope of project: market, audience, content; use as classroom support/follow-up to introduce people comfortably

E. Buy-in at upper management level; communication with staff during development to ID training needs

F. Good, knowledgeable facilitator who can create an environment in which people are willing to share info

G. Useful info to have just in time in order to do a job; user-friendly and sensitive to technology of agency

H. Good, extensive content for CBT, and encouraging participation via posting comments, questions & answers for classes

I. Buy-in from upper management; accessibility from office; some scheduled components and some self-paced to ensure completion

J. Training is well done and relevant, make first programs best to ensure future WBT success

K. Quality of program; if gives good value and is well thought out; if program stinks despite heavy marketing people will give WBT a black eye

32. What do you see as the top obstacles/traps that transit officials should be aware of when considering WBT?

A. Web access; "old school" mindset that training = classroom; make people see Web is the way of the world today

B. Thinking of training as 1-way info flow, or that complicated technology or "bells and whistles" = good training

C. To assume employee acceptance, to sign people up and assume they'll use WBT, must be aware of need for follow-up, evaluation

D. Don't replace classroom with WBT entirely; be aware of maintenance costs of WBT

E. Thinking of WBT as quick fix-it-all or that one size fits all; WBT must meet an organization's specific needs

F. People used to 1-way info flow expecting to come away from WBT with list of protocols or procedures instead of awareness & ability

G. IT must be on board to get things done; not true people will automatically take WBT; must promote & plan carefully, get right people to work on design and content

H. Drop-out; keeping people engaged and being more rigid about watching them to make sure they don't fall behind or drop out

I. People closed to idea of WBT, used to traditional and not willing to try WBT

J. How develop, and who deliver to. How give employees incentive to take WBT, especially if added to their daily challenges at work

K. Vendor glitz; don't get wowed by 10 minute sales demo; spend at least an hour with program before deciding to use or not

33. Do you have any other comments, suggestions, or recommendations on WBT and its potential for the transit industry?

A. Focus on the applications that lend themselves best to WBT; leave training of human interaction functions to classroom

B. No

C. WBT is the wave of the future; the sooner we all do it, the better off we all are

D. Best not to nickel-and-dime when developing WBT; don't ask too many questions but have faith it will work

E. No

F. No

G. People think WBT is fad & it's not; must get on bandwagon as eventually they'll be forced to as transit becomes more cost-conscious

H. No

I. No

J. Segment WBT so it speaks to specific agencies/populations in terms of subject matter, level of sophistication, etc.

K. Hope FTA takes an active role ensuring WBT continues to be useful, rather than leaving it up to "snake oil salesmen"

Abbreviations used without definitions in TRB publications:

AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
IEEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research and Development Program
NHTSA	National Highway Traffic Safety Administration
SAE	Society of Automotive Engineers
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
U.S.DOT	United States Department of Transportation