University of Pretoria

REFERENCE LIST

- Anderson, L.S. and Perry, J.F. (1996). <u>Technology planning: Recipe for success</u>. [Online] Available http://www.2.msstate.edu/~lsa1/nctp/tp.recipe.html, August 15, 1996.
- Apple Computer, Inc. (1990). ACOT Apple Classrooms of Tomorrow report number

 9 Teacher beliefs and practices: Part II: Support for change: The evolution of
 teachers' instructional beliefs and practices in high-access-to-technology classrooms
 first-fourth year findings. Cupiertino, CA.: Apple Computer, Inc.
- Apple Computer, Inc. (1991). <u>ACOT Apple Classrooms of Tomorrow report number</u>

 13 The relationship between technological innovation and collegial interaction.

 Cupiertino, CA.: Apple Computer, Inc.
- Apple Computer, Inc. (1992). ACOT Apple Classrooms of Tomorrow report number

 6 Computer acquisition: A longitudinal study of the influence of high computer

 access on students' thinking, learning, and interactions. Cupiertino, CA.: Apple
 Computer, Inc.
- 5 Arguile, D. (1996). Personal communication. September 16, 1996.
- 6 Becker, H.J. (1993). Instructional computer use: Findings from a national survey of school and teacher practices. The computing teacher, April 1993.
- 7 Broster, P. (1996). Personal communication. October 28, 1996.
- 8 Brunner, C. (1990). What it really means to "Integrate" technology. <u>Technology and</u> learning, 11, 3.
- 9 Carl, A.E. (1995). <u>Teacher empowerment through curriculum development: Theory into practice</u>. Cape Town: Juta.
- 10 Carter, K. (1996). Approved: Planning process. <u>Technology and learning</u>, March 1996.
- De Klerk, M. (1995). <u>Implementation of computers in schools</u>. [Online] Available email: pam@miller.wcape.school.za from martin@ted.pta.school.za, July 4, 1995.
- Department of Education (1996b). Education Labour Relations Council. <u>South</u>

 <u>African government gazette</u>, Notice No. 17226, May 31, 1996.
- Department of Education (1996a). Report of the ministerial committee for development work on the role of technology that will support and enhance learning:

 Technology enhanced learning investigation in South Africa a discussion document. [Pretoria: The Dept., Gov. Printer].

University of Pretoria

- Dwyer, C.D., Ringstaff, C. and Sandholtz, J.H. (1991). Changes in teachers' beliefs and practices in technology-rich classrooms. <u>Educational leadership</u>, May 1991.
- Dyrli, O.E. and Kinnaman, D.E. (1994). Gaining access to technology: First step in making a difference for your students. <u>Technology and learning</u>, January 1994.
- Fisher, C., Dwyer, D.D. and Yocam, K. (Eds.) (1996). <u>Education and technology:</u>

 <u>Reflections on computing in classrooms</u>. San Francisco: Jossey-Bass.
- 17 Frers, P. (1996) [Online] <u>Encouraging technology</u>. Available email: kidsphere@vms.cis.pitt.edu from pfrers@cln.etc.bc.ca, August 23, 1996.
- Fresen, J. (1996). <u>Statistics</u>. [Online] Available email: pam@miller.wcape.school.za from fresenjl@alpha.unisa.ac.za, October 11, 1996.
- 19 Ingpen, B. (1996). Personal communication. September 4, 1996.
- 20 IFIP (International Federation for Information Processing Working Group 3.1). (1993). Guidelines for good practice: Integration of information technology into secondary education: Main issues and perspectives. Geneva, Switzerland.
- 21 Jacoby, B. (1996). Personal communication. October 11, 1996.
- Kearsley, G., Hunter, B. and Furlong, M. (1992). We teach with technology.
 Wilsonville, Oregon: Franklin, Beedle and Associates.
- Kinnaman, D.E. (1994). Technology makes choice inevitable. <u>Technology and</u> learning, January 1994.
- 24 Knoetze, J. (1996). Developing a niche for computers in education. Proceedings of seminar <u>Effective computers in schools</u>. University of Pretoria, Pretoria.
- Kratzenstein, L. (1994). Principles of multimedia technology for school education in South Africa. <u>Unpublished technical report</u>, Graduate School of Business, University of Cape Town.
- Lippert, R. (1993). Great lies and tough truths. CBE, July/August 1993.
- 27 Lyndes, C. (1996). <u>The CSSD support model</u>. [Online] Available http://www.cvu.cssd.k12.vt.us/k12tech/hs-cssd.htm, August 15, 1996.
- McKinsey and Co. (1996). Quoted in <u>Emerging consensus on need for technology</u>

 <u>literacy challenge</u>. [Online] Available

 http://www.whitehouse.gov/wh/new/edtech/consen.html, August 15, 1996.
- 29 McMillan, J.H. and Schumacher, S. (1993). Research in education: A conceptual approach. New York: Harper Collins.
- Mecklenburger, J.A. (1989). Technology in the 1990's: Ten secrets for success.

 Principal, 69, 2.
- Morrison, A. (1989). <u>Computers in the curriculum of secondary schools</u>. Berwick upon Tweed: Scottish Council for Research in Education.

University of Pretoria

- Morrison, C. (1996). <u>Encouraging technology</u>. [Online] Available email: kidsphere@vms.cis.pitt.edu from currie@hamlet.phyast.pitt.edu, August 23, 1996.
- 33 Musco, R.S. (1995). Selling a school technology budget. <u>Educational leadership</u>, October 1995.
- O'Neil, J. (1995a). On technology schools: A conversation with Chris Dede. Educational leadership, October 1995.
- O'Neil, J. (1995b). Teachers and technology: Potential and pitfalls. <u>Educational</u> <u>leadership</u>, October 1995.
- Partee, M.H. (1996). Using e-mail, web sites and newsgroups to enhance traditional classroom instruction. THE Journal, 23, 11.
- 37 Paul, S. (1996). Personal communication. September 4, 1996.
- 38 <u>Pinelands High School in focus ...</u>. (1996). [Online] Available http://www.wcape.school.za/phs/phs.htm, September 3, 1996.
- Retail Data Library. (1994). <u>Pinelands</u>. Cape Town: Cape Newspapers.
- 40 Rieber, L.P. (1994). <u>Computers, graphics, and learning</u>. Madison, Wisconsin: Brown and Benchmark.
- Rieber, L.P. (1997). <u>Using computers in the classroom</u>. [Online] Available email: pam@miller.wcape.school.za from lrieber@coe.uga.edu, March 25, 1997.
- 42 Rieber, L.P. and Hooper, S. (1995) Teaching with technology. In A.C. Orstein (Ed.).

 Teaching: Theory into practice. Boston: Allyn and Bacon.
- 43 Rundle, M. (1996a). Personal communication. October 11, 1996.
- 44 Rundle, M. (1996b). Personal communication. November 5, 1996.
- Smith, R. (1995). How computers can be used in schools: A parent's guide. <u>The computing teacher</u>, March 1995.
- Stager, G.S. (1995). Laptop schools lead the way in professional development. <u>Educational leadership</u>, October 1995.
- Tierney, R.J. (1996). Redefining computer appropiation: A five-year study of ACOT students. In C. Fisher, D.C. Dwyer and K. Yocam (Eds.). <u>Education and technology: Reflections on computing in classrooms</u>. San Francisco: Jossey-Bass.
- 48 Vorster, C. (1995). <u>Another view on computers in schools</u>. [Online] Available usenet: school.za, July 26, 1995.
- 49 Vorster, C. (1996). Personal communication. September 24, 1996.
- Zorfass, J. (1991). A technology integration model for middle schools. <u>T.H.E.</u>
 Journal, September 1991.
- Zorfass, J. (1993). Curriculum: A critical factor in technology integration. <u>The computing teacher</u>, February 1993.

APPENDIX A

THE INTEGRATION OF COMPUTERS AT PINELANDS HIGH SCHOOL: A CASE STUDY

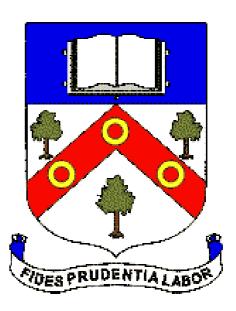
Hi

This questionnaire is part of an investigation into the efficient use of the computer at PHS and will, I hope, make life easier for all of us once the results have been evaluated. All of the questions relate to PHS and not time spent at another school.

I realise it will take some time out of your already busy day, but in the long term I think it will help all of us to be better teachers and communicators.

May I fetch the results tomorrow. Please drop the results in my pigeon hole.

Thanks in advance Pam Miller



THE INTEGRATION OF COMPUTERS AT PINELANDS HIGH SCHOOL: A CASE STUDY

For office

Please fill in where required or mark your choice with an X. Thank you in anticipation.

1. Personal details

How many years have you been teaching?

- 1. in total
- 2. at Pinelands High School

1	1.
1	2

2. Teaching subjects

Do you teach computer literacy?

Yes	No

2

3. Subjects

1. What subjects do you teach?

3	*
•	

4. Team teaching

1	Are you involved in any team-teaching in your department(s)?	Yes	No
2	. If YES, are you involved in any team-teaching in a department which involves the computer?	Yes	No

4	1.
4	2.

5. Groupwork

1.	Do you use group work in your teaching?	Yes	No
2.	If YES, do you use cooperative group work in your teaching (à la Dr Gibbon)?	Yes	No
3.	Do you use the computer for cooperative, general group work or both?	Yes	No
4.	Have you had training in teaching with cooperative groups or general groups?	Yes	No

5	1.
5	2.
5	3.
5	4.

6. Computer ownership

Have you ever borrowed a computer from school?		Yes	No
2.	Do you have a computer at home?	Yes	No
If \	If YES,		
3.	did you buy it before you joined the staff of PHS?	Yes	No
4.	did the school assist you financially in purchasing or upgrading the computer?	Yes	No
5.	did the school network operator assist you with the purchase or upgrade in any way?	Yes	No

6	1.
6	2.
6	3.
6	4.
6	5.

7. In-service/in-house computer training

Have you ever attended a training session on one of the following at PHS during the day?

word processing	Yes	No
2. spreadsheets	Yes	No
3. databases	Yes	No
4. e-mail	Yes	No
5. World Wide Web	Yes	No
6. graphics application	Yes	No
7. presentation application	Yes	No
8. databank e.g. Orbits, PCGlobe	Yes	No
9. subject-specific applications e.g. Turbo Cash	Yes	No
10. games e.g. Simcity, Simearth	Yes	No
11. programming language e.g. Logo	Yes	No

7	1.
7	2.
7	3.
7	4.
7	5.
7	6.
7	7.
7	8.
7	9.
7	10.
7	11.

8. Computer training funded by Pinelands High School

1.	Have you ever attended (a) computer training session (s), seminar(s) or conference(s) funded by the	Yes	No
lf \	ES, was that course at a		
2.	teacher centre?	Yes	No
3.	university?	Yes	No
4.	technikon?	Yes	No
5.	computer school?	Yes	No
6.	other? (please specify)	Yes	No

8	1.
8	2.
8	3.
8	4.
8	5.
8	6*.

9. Evening courses

1. Have you ever attended one of the evening courses offered by the Continuing Education Programme at PHS?

Yes	No
-----	----

10. Computer training paid for by yourself after initial teacher training

1.	Have you ever attended (a) computer training session(s), seminar(s) or conference(s) funded by		No
If \	/ES, was that course at a		
2.	teacher centre?	Yes	No
3.	university?	Yes	No
4.	technikon?	Yes	No
5.	computer school?	Yes	No
6.	other? (please specify)	Yes	No

10 1. 10 2. 10 3. 10 4. 10 5. 10 6*.

11. Bought subject software

1. F	Has your subject department bought a computer				
2. If	2. If YES, what is it called?				
If YE	S,				
3.	did you help decide which subject package	Yes	No		
4.	have you attended a training session on that	Yes	No		
5.	have you used that subject package in a lesson with a class?	Yes	No		

11	1.
11	2*.
11	3.
11	4.
11	5.

12. Use of the computer at school

How frequently do you use the applications below at school for lesson preparation?

1.	games e.g. Simcity	Daily	Weekly	Monthly	Annually	Never
2.	word processor	Daily	Weekly	Monthly	Annually	Never
3.	database	Daily	Weekly	Monthly	Annually	Never
4.	spreadsheet	Daily	Weekly	Monthly	Annually	Never
5.	graphics	Daily	Weekly	Monthly	Annually	Never
6.	e-mail	Daily	Weekly	Monthly	Annually	Never
7.	presentation package	Daily	Weekly	Monthly	Annually	Never
8.	World Wide Web	Daily	Weekly	Monthly	Annually	Never
9.	databank e.g. PCGlobe,	Daily	Weekly	Monthly	Annually	Never
10	programming language	Daily	Weekly	Monthly	Annually	Never
11	. subject-specific package	Daily	Weekly	Monthly	Annually	Never

12	1.
12	2.
12	3.
12	4.
12	5.
12	6.
12	7.
12	8.
12	9.
12	10.
12	11.

13. Use of the computer at home
How often do you use the computer applications below at home for lesson preparation or private matters?

1.	games e.g. Simcity	Daily	Weekly	Monthly	Annually	Never
2.	word processor	Daily	Weekly	Monthly	Annually	Never
3.	database	Daily	Weekly	Monthly	Annually	Never
4.	spreadsheet	Daily	Weekly	Monthly	Annually	Never
5.	graphics	Daily	Weekly	Monthly	Annually	Never
6.	e-mail	Daily	Weekly	Monthly	Annually	Never
7.	presentation	Daily	Weekly	Monthly	Annually	Never
8.	World Wide Web	Daily	Weekly	Monthly	Annually	Never
9.	databank e.g. Orbits	Daily	Weekly	Monthly	Annually	Never
10	.subject-specific program e.g. Pastel,	Daily	Weekly	Monthly	Annually	Never
11	. programming	Daily	Weekly	Monthly	Annually	Never

13	1.
13	2.
13	3.
13	4.
13	5.
13	6.
13	7.
13	8.
13	9.
13	10.
13	11.

14. Teaching

How often do you use the applications below while teaching?

1. games e.g. Simcity	Daily	Weekly	Monthly	Annually	Never
2. word processor	Daily	Weekly	Monthly	Annually	Never
3. database	Daily	Weekly	Monthly	Annually	Never
4. spreadsheet	Daily	Weekly	Monthly	Annually	Never
5. graphics	Daily	Weekly	Monthly	Annually	Never
6. e-mail	Daily	Weekly	Monthly	Annually	Never
7. presentation	Daily	Weekly	Monthly	Annually	Never
8. World Wide Web	Daily	Weekly	Monthly	Annually	Never
9. databank e.g. Orbits	Daily	Weekly	Monthly	Annually	Never
10. programming language	Daily	Weekly	Monthly	Annually	Never
11. subject-specific program	Daily	Weekly	Monthly	Annually	Never

14	1.
14	2.
14	3.
14	4.
14	5.
14	6.
14	7.
14	8.
14	9.
14	10.
14	11.

15. Decision making

Have you had any input into the ...

1.	long term plans of the school as a whole?	Yes	No
2.	methodology of teaching in your department?	Yes	No
3.	evaluation methods in your department?	Yes	No
4.	content of courses in your department?	Yes	No

15	1.
15	2.
15	3.
15	4.

16. Computer-related decision making Have you had any input into the ...

1.	decisions with regard to who teaches the subject computer literacy?	Yes	No
2.	decisions with regard to the purchase of computer hardware?	Yes	No
3.	decisions with regard to purchasing of computer software?	Yes	No
4.	discipline code of the computer room?	Yes	No
5.	physical design of the computer room?	Yes	No
6.	hours of the computer room?	Yes	No
7.	long-term plans for the computer room?	Yes	No

16	1.
16	2.
16	3.
16	4.
16	5.
16	6.
16	7.

17. Advice

From the computer department at school are you able to get advice on the following computer applications when you need it?

1. word processor	Yes	No	Never considered asking
2. spreadsheet	Yes	No	Never considered asking
3. database	Yes	No	Never considered asking
4. presentation package	Yes	No	Never considered asking
5. World Wide Web	Yes	No	Never considered asking
6. e-mail	Yes	No	Never considered asking
7. graphics	Yes	No	Never considered asking
8. databank e.g. Orbits	Yes	No	Never considered asking
9. programming language e.g. Logo	Yes	No	Never considered asking
10. laser printer	Yes	No	Never considered asking
11. game e.g. Simcity	Yes	No	Never considered asking

17	1.
17	2.
17	3.
17	4.
17	5.
17	6.
17	7.
17	8.
17	9.
17	10.
17	11.

18. Access to a computer application

Do you have access to the following computer applications at school when you need it?

	1		
word processor	Yes	No	Never considered using
2. spreadsheet	Yes	No	Never considered using
3. database	Yes	No	Never considered using
4. presentation package	Yes	No	Never considered using
5. World Wide Web	Yes	No	Never considered using
6. e-mail	Yes	No	Never considered using
7. graphics	Yes	No	Never considered using
8. databank e.g. Orbits	Yes	No	Never considered using
9. programming language e.g. Logo	Yes	No	Never considered using
10. laser printer	Yes	No	Never considered using
11. game e.g. Simcity	Yes	No	Never considered using

18	1.
18	2.
18	3.
18	4.
18	5.
18	6.
18	7.
18	8.
18	9.
18	10.
18	11.

19. Teaching at PHS using the computerHave you used any computer application in the teaching of a lesson ...

1.at PHS?	Yes	No
2.at PHS during 1996?	Yes	No





APPENDIX B



THE INTEGRATION OF COMPUTERS AT PINELANDS HIGH SCHOOL: A CASE STUDY

2 September 1996

Hi

Thank you for completing the questionnaire last week. I am truly grateful.

Would you please complete this short questionnaire which is for those who have used the computer for teaching - stats to hand indicate that 23 teachers have used the computer in teaching.

Please complete one of the attached sheets for each of the subjects in which you have used the computer for teaching.

I would appreciate it if I could fetch the results tomorrow, Tuesday. Please drop the sheets in my pigeon hole.

Many thanks in advance Pam Miller

1.	Have you used any computer package(s) in the teaching	Yes	No
2.	Have you shared information (printed or verbal) about a		
a.	teachers in your department?	Yes	No
b.	other adults in the school?	Yes	No
c.	teachers not from PHS?	Yes	No
3.	Have you published anything about (a) computer-related lesson(s)? If YES, please specify titles of	Yes	No
4.	Have you mentored any person in a computer-related	Yes	No
5.	Were you mentored by anyone in a computer-related	Yes	No
6.	In general, in your computer classes,		
a.	do the students work in (A) pairs/groups or (B) on	(A)	(B)
b.	would you prefer the students to work in (A) pairs/	(A)	(B)
C.	do you act as a (A) facilitator or (B) focus?	(A)	(B)
7.	What computer applications have you used in teaching during the last year? (Please list)		
8.	Which of the applications which you use in teaching do you have access to at home? Please indicate on the list		
9.	In general, in your computer classes, is the material of the	Yes	No
10	. In general, in your computer classes, do the students use		
a.	the purpose of learning a specific skill e.g. typing.	Yes	No
b.	the specific purpose of learning the package.	Yes	No
c.	retaining information e.g. drill and practice.	Yes	No
d.	processing information by typing/drawing e.g. word	Yes	No
e.	communicating with someone e.g. e-mail.	Yes	No
f.	finding information and possibly drawing conclusions	Yes	No
g.	creating new knowledge e.g. multimedia	Yes	No
h.	(your own wording)	Yes	No

1.
2a.
2b.
2c.
3.
3*.
4.
5.
6a.
6b.
6c.
7*.
8*.
9.
10a.
10b.
10c.
10d.
10e.
10f.
10g.
10h*.