District Education and Technology Services (DETS) Survey Results

Fall 2010

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Introduction

At the request of the San Bernardino Community College District (SBCCD) Distributed Education and Technology Services (DETS) department, the Crafton Hills College (CHC) Office of Research and Planning (ORP) worked with representatives to create a comprehensive needs-assessment survey designed to guide in the development of a long-range distributed education and technology services plan.

This report provides a summary of the purpose, methodology, and results of the DETS survey to help inform Technology Services planning and decision-making. This assessment is one means through which DETS can give a voice to those they serve. This survey was undertaken for the following purposes, all of which helped to guide the survey design process.

- To document areas where employees are satisfied or dissatisfied, and identify gaps
- To find out what improvements are important to employees
- To use this data to inform the prioritization of efforts to enhance the quality of distributed educational and technology services
- Support the needs of the District community and improve the ability of employees to use technology to perform their jobs

Executive Summary

Satisfaction with Technology Services (see Table 2)

- Respondents were most satisfied with the courtesy (Mean=4.44) and knowledge (Mean=4.28) of the Deskside support technicians
- Respondents were less likely to be satisfied with the look and feel of the college and district websites (Mean=3.10)

Responsiveness (see Table 3)

- Overall, respondents rank technology services as moderately responsive (Mean=3.61)
- Respondents were more likely to indicate that technology services were responsive to resolving login and password problems (Mean=3.88).

Interruptions (see Table 4)

- According to 57% of the respondents, email was unavailable 2 or more times for fifteen minutes or more during the last 12 months
- According to 54% of the respondents, the internet was unavailable 2 or more times for fifteen minutes or more during the last 12 months

Changes/Outages (see Table 5)

- 84% of respondents agreed that DETS provides the right amount of communication when **planned** system changes and outages occur
- 76% of respondents agreed that DETS provides the right amount of communication when **unplanned** system changes and outages occur

Training (see Table 6)

- 60% of the respondents agreed that trainings for distributed education were sufficient.
- Overall, respondents were satisfied with distributed education training (mean=3.73)

Telephone (see Table 7)

- 68% of the respondents have not used conference calling in the past 12 months
- 49% of the respondents have not used call forwarding in the past 12 months

Computer Replacement (See Table 8)

- 32% of the respondents suggested that their personal computer should be replaced every 3 years
- 28% of respondents agreed that computers located in labs should be replaced every 2 years

Internet/Email (See Table 9)

- The incidences of spam and viruses (46%) and other related e-mail problems (53%) have remained about the same over the past year
- 80% indicated that they do not change the content of one or more district or college websites themselves using a content management system such as Sitecore or Frontpage

Deskside Support (See Table 10)

- 72% of respondents agreed that the Deskside technicians were able to help in a timely manner
- Deskside support technicians were almost always (Mean=3.98) able to resolve problems

Help Desk (See Table 11)

- 60% of the respondents have called the Help Desk between 2 to 6 times to report a problem over the past 12 months and 57% of the callers waited 5 minutes or less
- Overall, respondents indicated that they were satisfied with the Help Desk (Mean=3.14)

Technology in the Classroom (See Table 13)

- The most common of the web resources used in the classroom were Blackboard (24%) and YouTube (19%)
- The technology most commonly used in the classroom currently and that Faculty are planning to use in the future is an LCD projector (27%)

Methodology

The DETS Executive Director distributed the survey on November 29, 2010 via e-mail to all SBCCD employees. A reminder email was sent on December 9, 2010, and the survey closed at 5:00pm on December 10, 2010.

The survey consisted of multiple-choice, multi-response questions spanning a range of topics including; customer service, help desk, audio visual, desk side support, classroom technology, networking, email, voicemail, web services, security, access, databases, training, and other technical services. Additionally, multiple-choice questions asked respondents to select their primary location, function, and length of employment with the district. Participants were also provided with open-ended comment boxes that allowed them to indicate other (non-listed) comments, suggestions, improvements, and training needs. Open-ended responses are not included in this report.

Referring to Tables 2, 3, 10, 11, 12 and 15; the first column lists the statements, the second column (i.e. "N") shows the number of District employees who responded to the item, the column entitled "Min" shows the lowest response on the scale, the column entitled "Max" shows the highest response on the scale, the column "Mean" shows the average rating, and the last column shows the standard deviation. Respondents rated whether or not they agreed with the statements on a five-point Likert scale similar to the example that follows:

1 = Not at All Satisfied
2 = Not Very Satisfied
3 = Somewhat Satisfied
4 = Satisfied
5 = Very Satisfied

If the Min (i.e. lowest) score was a "3", that means that none of the respondents were dissatisfied. If the Max score was a "5", that means that at least one respondent was "Very Satisfied". As an illustration, if the mean score was 4.65, that would indicate that, on average, respondents were

either satisfied or very satisfied. All tables are arranged by Mean score in descending order and exclude missing data and "Did Not Use" or "Not Applicable" responses.

Sample

Distributed Education and Technology Services (DETS) serves the San Bernardino Community College District, which consists of Crafton Hills College, San Bernardino Valley College, and the District Office. This survey was distributed to approximately 1,235[1] employees of the SBCCD community and had a response rate of approximately 10% (n=127). A limitation is that only employees with a district email account had access to this survey and no paper surveys were distributed. Feedback is most applicable from employees with computers who utilize the services of distributed education and technology services. The response rate is most likely higher, however, because we do not know the number of employees the survey was accessible to, this rate is based on the number of responses divided by the total number of district employees. All full-time and part-time faculty members, classified and confidential staff, and managers at all locations across the district with a district email account were given the opportunity to complete the survey. A 10% response rate provides a limited level of statistical validity when it comes to generalizing the results to the entire campus community. A larger sample size is needed to increase the likelihood that these results accurately reflect the views of all SBCCD employees.

The majority of respondents primarily work at San Bernardino Valley College (SBVC) campus (48%) followed by the Crafton Hills College (CHC) campus (31%). Respondents indicated that they were more likely to be employed with SBCCD for 2-5 years (27%) or 6-10 years (24%). Forty-one percent of the respondents identified themselves as classified staff and an additional 39% were either full-time or part-

[1] Source: http://employeedata.cccco.edu/headcount_by_college_09.pdf- fall 2009- San Bernardino Community College District Employee Headcount Staffing Report. Data retrieved 11/12/2011.

time faculty members. Thirty-five percent of the respondents were teaching at least one class in Fall 2010, of those, 42% indicated that they were teaching five or more classes.

Table 1: Respondents Primary Location, Function, Length Employed, and Teaching Status.

Location	N	%
SBVC	61	48.0
CHC	39	30.7
District Offices	11	8.7
District Annex	12	9.4
KVCR	2	1.6
EDCT/PDC	1	0.8
Other	1	0.8
Total	127	100.0

Function	N	%
Full-time Faculty	**42**	33.1
Part-time Faculty	**8**	6.3
Classified	52	40.9
Confidential	3	2.4
Manager	21	16.5
Missing	1	0.8
Total	127	100.0

Length of employment	N	%
This is my first year	9	7.1
2-5 years	34	26.8
6-10 years	31	24.4
11-15 years	22	17.3
16-20 years	13	10.2
21 or more years	18	14.2
Total	127	100.0

Are you teaching this semester	N	%
Yes	**45**	35.4
No	82	64.6
Total	127	100.0

If yes, # of classes	N	%
1-2	11	24.4
3-4	15	33.3
5 or more	19	42.2
Total	45	100.0

Results

Table 2 is organized in descending order by mean score where the minimum is 1 (not at all satisfied) and the maximum is 5 (very satisfied). These questions relate to the level of satisfaction for twenty-two aspects of technology services. Respondents indicating that they did not use the service were excluded from the results. Respondents were more likely to indicate that they were satisfied with the courtesy (Mean=4.44) and knowledge (Mean=4.28) of Deskside support technicians. On the other hand, respondents were less likely to be satisfied with the look and feel of the college and district websites (Mean=3.10), the Help Desk Live Chat feature (Mean=3.07), and the Help Desk Knowledge Base feature (Mean =3.10). However, fewer respondents indicated they had used the Live Chat and Knowledge Base features.

Table 2: Satisfaction with Technology Services in Descending Order from Most Satisfied to Least Satisfied

	For each of the following aspects of technology services, please rate your overall satisfaction	N	Min	Max	Mean	Std. Dev.
f	Courtesy of Deskside Support technicians	93	1	5	**4.44**	.85
k	Knowledge of the Deskside Support technicians	92	1	5	**4.28**	.95
p	Services provided by the Audio Visual Department	82	1	5	4.22	1.13
m	Functions and features of the e-mail system	121	1	5	4.01	.91
l	Functions and features of you voicemail	116	1	5	3.82	1.03
o	Timeliness of a final resolution of your phone or voicemail issues	99	1	5	3.77	1.18
k	Functions and features of your phone	119	1	5	3.75	1.03
h	Feedback/notification about resolution of a reported problem	115	1	5	3.68	1.08
n	Functions and features of your primary computer at work	119	1	5	3.63	1.28
c	Help Desk Submit a Ticket Online feature	72	1	5	3.63	1.28
u	Availability of web services	91	1	5	3.55	1.13
r	Advance notification when technology changes are made	109	1	5	3.48	1.19
b	Timeliness of the Help Desk services final resolution	116	1	5	3.46	1.27
s	Receiving information about new technologies	109	1	5	3.36	1.19
q	Clarity of the process for requesting technology training	70	1	5	3.31	1.20
a	Consistency of Help Desk services	110	1	5	3.31	1.31
i	Availability of documentation for technology you use in your job	89	1	5	3.27	1.22
j	Adequacy of documentation for the technology you use in your job	90	1	5	3.24	1.20
t	Management and support of your departmental or individual website	84	1	5	3.18	1.30
v	Look and feel of college and district websites	124	1	5	**3.10**	1.12
e	Help Desk Knowledge Base feature	51	1	5	3.10	1.33
d	Help Desk Live Chat feature	29	1	5	3.07	1.53

Next, respondents were asked to rate their perception of how responsive technology services has been in eighteen specific areas. Table 3 is organized in descending order by mean score where the minimum is 1 (not at all responsive) and the maximum is 5 (extremely responsive) Respondents indicating that they did not use the service were excluded from the results. All categories had a mean score between 3.11 and 3.88, equating to an overall level of moderately responsive. Respondents were more likely to indicate that resolving login and password problems (Mean=3.88) and support and maintenance of e-mail (Mean=3.76) were areas of greater responsiveness for technology services.

Table 3: Responsiveness of Technology Services in Descending Order from Most Responsive to Least Responsive

	For each of the following categories, how responsive have technology services been?	N	Min	Max	Mean	Std. Dev.
p	Resolving login and password problems	97	1	5	3.88	1.10
h	Support and maintenance of the e-mail system you use	100	1	5	3.76	1.04
n	Resolving reported computer and network security problems	61	1	5	3.69	1.18
r	**Overall responsiveness of technology services**	**113**	**1**	**5**	**3.61**	**1.07**
b	Other support of the Blackboard course management system	44	1	5	3.57	1.13
i	Support and maintenance of the SARS departmental calendar system	33	1	5	3.55	1.12
f	Meeting your web services needs overall	85	1	5	3.48	1.08
g	Installation, configuration & maintenance of computers, printers, scanners	100	1	5	3.44	1.24
l	Installation of software in instructional labs	34	1	5	3.38	1.50
a	Training in online teaching tools	49	1	5	3.35	1.11
d	Fixing reported web services issues	59	1	5	3.32	1.15
j	Installation and maintenance of technology-based classroom equipment	45	1	5	3.29	1.47
c	Training in the other technology-related subjects	62	1	5	3.27	1.13
m	Videoconferencing	16	1	5	3.25	1.61
e	Providing requested new web services	52	1	5	3.19	1.17
o	Purchase and renewal of software licenses	44	1	5	3.11	1.47

Table 4 is a collection of the respondent's perceived frequency of which their work has been interrupted, delayed or otherwise disrupted for fifteen minutes or more as the result of problems with district technology. Multiple choice response questions included options ranging from never to more than 12 times to reflect the rate of recurrence. Of the ten technologies listed, respondents indicated that their work was most commonly interrupted as the result of their email (35%) and internet (31%) being unavailable at a frequency of two or three times. Respondents were most likely to indicate never having their work interrupted as the result of phone service being unavailable on another district phone (66%).

Table 4: Interruptions or Delays related to District Technology

How often has your work been interrupted, delayed or otherwise disrupted for 15 minutes or more by each of the following problems with district technology?	Never		1 time		2-3 times		4-6 times		7-12 times		More than 12 times	
	N	%	N	%	N	%	N	%	N	%	N	%
Email was unavailable	33	26.0	22	17.3	45	**35.4**	19	15.0	7	5.5	1	.8
The internet was unavailable	27	21.3	21	16.5	39	**30.7**	19	15.0	10	7.9	1	.8
Another software application unavailable	65	51.2	15	11.8	26	20.5	7	5.5	7	5.5	5	3.9
Normally accessible document unavailable	81	63.8	11	8.7	20	15.7	6	4.7	4	3.1	3	2.4
Information on district website unavailable	70	55.1	15	11.8	27	21.3	8	6.3	1	.8	3	2.4
Voicemail was unavailable on my phone	66	52.0	21	16.5	19	15.0	11	8.7	4	3.1	4	3.1
Voicemail unavailable on a district phone	81	63.8	15	11.8	15	11.8	8	6.3	2	1.6	2	1.6
Phone service was unavailable on my phone	62	48.8	24	18.9	27	21.3	10	7.9	1	.8	2	1.6
Phone service unavailable other district phone	84	**66.1**	13	10.2	16	12.6	8	6.3	1	.8	2	1.6
Wireless network services were unavailable	66	52.0	16	12.6	22	17.3	7	5.5	4	3.1	9	7.1

As seen in Table 5, respondents agree that DETS provides the right amount of communication for both planned (84%) and unplanned (76%) system changes.

Table 5: District Technology Communications Regarding Changes or Outages

Please evaluate the amount of detail in the communications you typically receive regarding each of the following:	Too little		Right amount		Too much		None	
	N	%	N	%	N	%	N	%
Planned system changes or outages	10	7.9	107	84.3	3	2.4	5	3.9
Unplanned system changes or outages	17	13.4	97	76.4	2	1.6	8	6.3

Training for technology and software systems is provided in collaboration with the District professional development program. As seen in Table 6, questions were asked regarding respondents perception of trainings in the areas of distributed education, productivity, and administrative application to determine the level of satisfaction with trainings and whether the trainings were sufficient. The first question shown in Table 6 is organized in descending order by mean score where the minimum is 1 (not at all satisfied) and the maximum is 5 (very satisfied). Respondents indicating that they did not use the service were excluded from satisfaction and sufficient training results. Respondents were more likely to indicate satisfaction for trainings related to distributed education (Mean=3.73). Similarly, respondents rated the distributed education trainings as sufficient (60%).

Table 6: Training Satisfaction and Sufficiency in Descending Order from Most Satisfied to Least Satisfied

Please rate you level of satisfaction with training in each of the following technology areas:	N	Min	Max	Mean	Std. Dev.
Distributed Education (Blackboard, Camtasia Relay, EduStream, iTunesU)	51	1	5	3.73	1.13
Productivity (Microsoft Office, Elumen, Wellness)	85	1	5	3.48	1.15
Administrative Applications (Datatel, Financial 2000, EduReports, ERIS)	73	1	5	3.36	1.14

Please indicate whether training was sufficient for each of the following technology areas:	Yes		No		Don't know	
	N	%	N	%	N	%
Distributed Education (Blackboard, Camtasia Relay, EduStream, iTunesU)	37	29.1	11	8.7	76	**59.8**
Productivity (Microsoft Office, Elumen, Wellness)	34	26.8	29	22.8	60	**47.2**
Administrative Applications (Datatel, Financial 2000, EduReports, ERIS)	33	26.0	33	26.0	57	**44.9**

Table 7 illustrates the frequency of use for respondents specific to features related to telephone services. The majority of respondents have not used conference calling (68%) or call forwarding (49%) in the past 12 months (68%).

Table 7: Technology Services Utilization of Telephone Services

How often have you used each of the following phone features in the last 12 months?	Never		1 time		2-3 times		4-6 times		7-12 times		More than 12 times	
	N	%	N	%	N	%	N	**%**	N	%	N	%
Call forwarding	**62**	**48.8**	11	8.7	20	15.7	9	7.1	9	7.1	16	12.6
Conference calling	**86**	**67.7**	8	6.3	16	12.6	9	7.1	5	3.9	3	2.4

Table 8 is a compilation of the findings related to computer replacement. Overall, respondents were more likely to indicate (32%) that they believe their personal computer should be replaced every three years. Part-time faculty (75%) suggest their computer should be replaced every two or three years, while overall the respondents (31%) believed four years to be more appropriate time-frame for replacing computers of adjunct instructors. On the other hand, 59% of the respondents agreed that computers located in labs should be replaced every two or three years.

Table 8: Technology Services Replacement of Computers

How often do you feel your primary computer should be replaced?	Full-time faculty		Part-time faculty		Classified		Confidential		Managers		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Every 2 years	13	31.7	3	37.5	11	21.2	1	33.3	2	9.5	30	24.0
Every 3 years	15	36.6	3	37.5	11	21.2	1	33.3	10	47.6	40	32.0
Every 4 years	11	26.8	2	25.0	17	32.7	0	0.0	6	28.6	36	28.8
Every 5 years	2	4.9	0	0.0	7	13.5	1	33.3	2	9.5	12	9.6
Every 6 years or more	0	0.0	0	0.0	5	11.5	0	0.0	1	4.8	7	5.6

How often have do you used feel the primary computer for each of the following should be replaced?	Every 2 years		Every 3 years		Every 4 years		Every 5 years		Every 6 years or more	
	N	%	N	%	N	%	N	%	N	%
Faculty	25	19.7	**46**	**36.2**	31	24.4	10	7.9	12	9.4
Staff	26	20.5	**39**	**30.7**	38	29.9	13	10.2	6	4.7
Administrators	28	22.0	**41**	**32.3**	32	25.2	11	8.7	10	7.9
Labs	35	27.6	**39**	**30.7**	31	24.4	9	7.1	8	6.3
Adjunct Instructors	16	12.6	31	24.4	**39**	**30.7**	18	14.2	20	15.7
Classrooms	27	21.3	**44**	**34.6**	38	29.9	5	3.9	10	7.9
Kiosk systems	22	17.3	**39**	**30.7**	35	27.6	8	6.3	15	11.8

Table 9 is a compilation of the two Likert-scale questions related to internet and email security. Respondents agreed that the incidence of e-mail spam and viruses (46%) and other related e-mail related problems (53%) have remained about the same over the past year.

Table 9: Internet and Email Security

How has the incidence of e-mail spam and viruses changed over the past year?	Much more frequent				About the same				Much less frequent	
	N	%	N	%	N	%	N	%	N	%
	27	21.3	12	9.4	**58**	**45.7**	9	7.1	17	13.4

How has the response to e-mail-related problems such as black listings, lost e-mails, inability to connect to e-mail changed over the past year	Much worse				About the same				Much better	
	N	%	N	%	N	%	N	%	N	%
	8	6.3	8	6.3	**67**	**52.8**	21	16.5	19	15.0

Table 10 assembles the results of questions specifically related to Deskside support technicians. Deskside support technicians were most likely to visit respondents at their office in response to a reported problem two to three times (46%). In addition, on a scale where 1 (Never) is the minimum and 5 (Always) is the maximum, Deskside support technicians were almost always (Mean=3.89) able to resolve the problem. In cases where the technician was unable to resolve the problem, 48% of

respondents indicated that they called on other technicians for assistance. Finally, respondents agreed (72%) that the Deskside technicians were able to help respondents in a timely manner.

Table 10: Deskside Support

How many times has a Deskside Support technician come to your office in response to a problem you reported?	Never		1 time		**2-3 times**		4-6 times		7-12 times		More than 12 times	
	N	%	N	%	**N**	**%**	N	**%**	N	%	N	%
	23	18.1	18	14.2	**58**	**45.7**	23	18.1	4	3.1	1	.8

How often has the Deskside Support Technician able to resolve your reported problem(s)?	N	Min	Max	Mean	Std. Dev.
	121	1	5	3.98	1.29

If the Deskside Support technician was initially unable to resolve your problem, did he or she seek assistance from other technicians?	**Yes**		No		Don't know	
	N	**%**	N	%	N	%
	61	**48.0**	11	8.7	43	33.9

Were you helped by an onsite technician in a timely manner?	**Yes**		No	
	N	**%**	N	%
	92	**72.4**	24	18.9

As seen in Table 11, respondents were asked four multiple-choice and two Likert-scale questions which were directly related to the frequency of use, efficiency, effectiveness, and service of the District Help Desk. Using a scale of 1 (Not at all satisfied) to 5 (Completely satisfied), Overall, respondents indicated that they were satisfied with the Help Desk (Mean=3.14). Sixty-percent of the respondents reported a problem by calling the Helpdesk two to six times over the past twelve months, and 57% of the callers reported waiting five minutes or less. Using a scale with a minimum of 1 (Never), and a maximum of 5 (Always), respondents agreed that the Help Desk (Mean=3.41) is able to resolve problems sometimes. Respondents also agreed (63%) that the last time the Help Desk was unable to resolve the problem, a ticket was created, and 65% of the respondents had zero abandoned calls when calling the Help Desk.

Table 11: Help Desk

How many times have you called the Help Desk to report a problem?	Never		1 time		2-3 times		4-6 times		7-12 times		More than 12 times	
	N	%	N	%	N	%	N	%	N	%	N	%
	14	11.0	10	7.9	44	34.6	32	25.2	18	14.2	8	6.3

When calling the Help Desk, what was the average length of your wait time?	5 minutes		10 minutes		15 minutes		20 minutes		25 minutes		30+ minutes	
	N	%	N	%	N	%	N	%	N	%	N	%
	72	56.7	20	15.7	11	8.7	9	7.1	2	1.6	3	2.4

When calling the Help Desk, how many of your calls were abandoned?	None		1 call		2-3 calls		4-6 calls		6 calls or more	
	N	%	N	%	N	%	N	%	N	%
	83	65.4	15	11.8	20	15.7	3	2.4	2	1.6

How often has the Help Desk been able to resolve your reported problems?	N	Min	Max	Mean	Std. Dev.
	115	1	5	3.41	1.36

Overall, what is your level of satisfaction with the Help Desk??	N	Min	Max	Mean	Std. Dev.
	118	1	5	3.14	1.31

The last time the Help Desk was unable to resolve your problem, did they create a ticket?	Yes		No		Don't know	
	N	%	N	%	N	%
	80	63.0	4	3.1	36	28.3

Out of the 127 respondents, 80% indicated that they do not change the content of one or more district or college websites themselves using a content management system such as Sitecore or Frontpage. The 17% who do use one or both of the content management systems used a five-point Likert scale with choices ranging from 1 (very difficult) to 5 (very easy) to rate the ease of use. The maximum score for Sitecore was 4, therefore none of the respondents ranked this tool as very easy to use. The mean score for Sitcore was 2.47 or perceived as more difficult than easy. Similarly, although Frontpage did receive at least one very easy rating, this tool was also perceived as more difficult than easy with a mean score of 2.36.

Table 12: Website Content Management

Do you change the content of one or more district or college websites yourself, using a content management system such as Sitecore or FrontPage?	Yes		No	
	N	%	N	%
	21	16.5	101	79.5

Please rate the ease of using each of the following tools:	N	Min	Max	Mean	Std. Dev.
Sitecore	19	1	4	2.47	.964
FrontPage	11	1	5	2.36	1.206

Survey respondents who answered "yes" when asked if they were teaching any classes this semester were routed to five additional questions before returning to the remainder of the survey. As seen in Table 1, there were forty-five respondents who were teaching at least one course in Fall 2010, regardless of their primary function. The responses to the five additional questions for those teaching in Fall 2010 are directly related to technologies in the classroom, and are included in Figures 2 and 3, and Tables 13, 14, and 15.

Figure 2 and Table 13 illustrate the technologies that the 45 respondents have either actually used and/or have a plan to use in the classroom in the future. The LCD Projector is the most commonly used technology currently (27%) and 27% of the respondents also plan to use an LCD projector in the future. Nine percent of the respondents indicate they plan to use the polling system in the classroom as compared to 1% who have actually used it. There was also an increased intent to utilize the document camera (10%) and smartboard (6%) in the classroom.

Figure 1: Classroom Technology

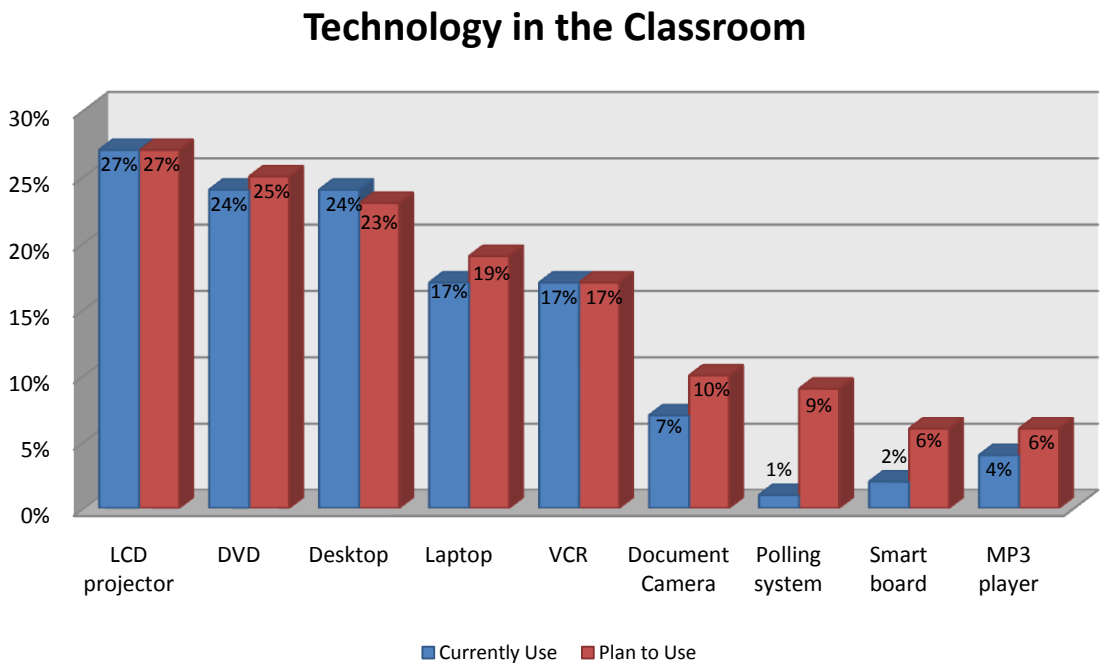

Table 13: Technology in Classrooms

Classroom technology	Currently use		Plan to use	
	N	%	N	%
LCD projector	34	26.8	34	26.8
DVD	30	23.6	32	25.2
Desktop	30	23.6	29	22.8
Laptop	22	17.3	24	18.9
VCR	22	17.3	21	16.5
Document Camera	9	7.1	13	10.2
MP3 player	5	3.9	8	6.3
Other	3	2.4	9	7.1
PDA	3	2.4	3	2.4
Smart board	2	1.6	8	6.3
Student polling systems	1	0.8	11	8.7
iPhone/iTouch/iPad	1	0.8	4	3.1
Portable touchpad	0	0	5	3.9

Figure 3 and Table 14 illustrate the web resources that the forty-five respondents use in the classroom. The most common of the web resources used in the classroom was Blackboard (24%) and YouTube (19%).

Figure 2: Classroom Web Resources

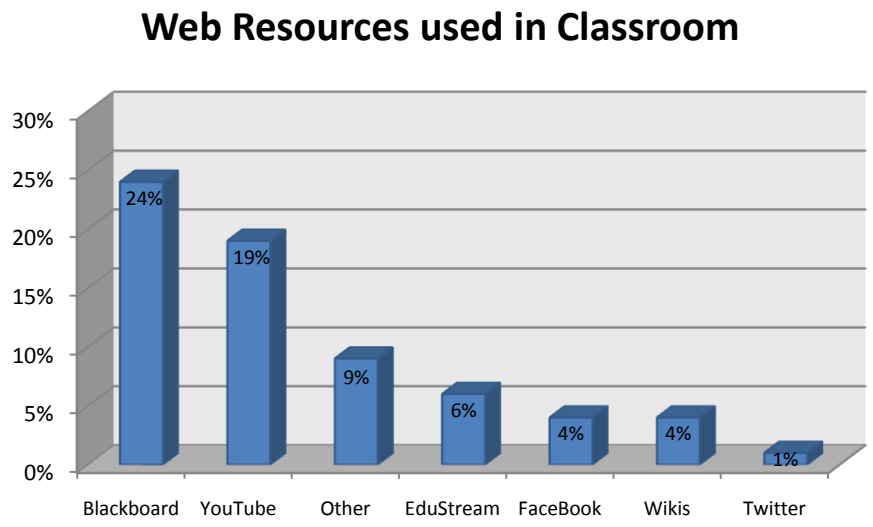

Table 14: Web Resources in Classrooms

Classroom web resources	Currently use	
	N	%
You Tube	24	18.9
FaceBook	5	3.9
Wikis	5	3.9
Twitter	1	.8
Blackboard	30	23.6
EduStream	7	5.5
Other	11	8.7

As seen in Table 15, respondents rated how easy it is to use the smart classrooms and their level of satisfaction with the technologies provided in the classroom. Table 13 is organized in descending order by mean score. When asked how easy it is to use the smart classroom, the scale ranged from a minimum of 1 (very difficult) to a maximum of 5 (very easy), therefore a mean score of 4.23 would indicate that, on average, respondents rated the smart classrooms as easy or very easy to use. Similarly, respondents were asked to select their perceived level of satisfaction with the technology in the classroom on a five point Likert-scale with choices ranging from 1 (not at all satisfied) to 5 (very

satisfied). The majority of respondents were somewhat satisfied or satisfied as was indicated by the mean score of 3.33.

Table 15: Technology in the Classroom

	Classroom technology	N	Min	Max	Mean	Std. Dev.
a	Easy to use the smart classrooms	30	2	5	4.23	.935
b	Satisfaction with the technology provided for you in the classroom	40	1	5	3.33	1.163