

Distance Education Report, August 2001

California Community Colleges

Fiscal Years 1995-1996 through 1999-2000

Summarized by Martin Hittelman

Introduction

Using data as defined by Title 5 Regulations of the California Community Colleges' Board of Governors and *Standing Order 409* (Appendix A), this report is a seven-year study of the development and implementation of Distance Education (DE) in the California Community College System during this period of time. This system-wide data provides information about the students served through DE including the age, ethnicity, gender, and disabilities of students enrolled in these courses. It also includes information about student access, enrollment, and course completion rates as well as student and faculty satisfaction with this instructional delivery mode. This report focuses on the issues raised by this research and makes recommendations to the Board of Governors for the implementation of new policies that are needed to support DE system-wide.

Background

Distance Education (DE) began in the California Community Colleges with correspondence and newspaper-based courses. In the late 1960's, several California Community Colleges formed consortia to develop and deliver instructional television courses. Today, "telecourses" remains the dominant mode of DE instruction. California Community Colleges are now beginning to create "on-line" courses.

On March 10, 1994, and after extensive consultation and compromise, the Board of Governors approved regulations permitting colleges and districts, **during an evaluation period**, to design and offer DE courses and programs beyond those previously authorized. The revised Title 5 Regulations allowed districts, for the first time, to offer **non-transfer and noncredit courses**. In order to evaluate the experiment, the regulations mandated that DE courses be evaluated and approved separately by local curriculum committees. In addition, the new Board of Governors regulations established a task force to develop guidelines and the Distance Education Technical Advisory Committee (DETAC) to oversee the experiment.

During the period from 1994 to 1998, and based on recommendations from DETAC, the Board of Governors revised regulatory language that changed language requiring "regular **personal** contact" between instructors and students to "regular *effective* contact." This change allowed the use of e-mail, chat rooms, faxes and voice mail in place of personal contact. The amendment also included the extension of the evaluation period from June 2000, to January 1, 2002.

Results

In a 1995-96 Survey of the colleges, the following anecdotal information was provided:

- The first distance education course in the system dates back to 1970.
- The primary purpose for offering distance education courses was accessibility for students.
- The primary mode of delivery of DE courses was telecourses (cable/television).
- Only a few colleges offered on-line courses.

- The profile student was a white female between the ages of 25 and 36 who was an employed, single parent with children under the age of 18.
- Two colleges offered one non-transfer course each.
- Faculty who taught DE courses were self-selected.
- There were no system-wide or district/campus standard guidelines regarding staff development.
- Training was provided to instructors in various formats and few campuses had extensive training programs for faculty to develop DE courses.
- District and campus personnel felt that technology mediated instruction was viable and should be expanded.

As we shall see from the current report, little has changed since the 1995-96 survey except that there has been an expansion of on-line courses.

From 1996 to the present, the institutional data collected from the colleges has been more structured and empirical.

In the following report, a **course** is a unique offering by a college, which has a unique course outline that has been approved by a curriculum committee (e.g. Bio. 1: Principles of Biology). A **course section** is an individual course offering that is assigned a unique course identifier by the local college (e.g. Biology 1–04, which would denote the fourth section of Bio. 1 being offered in a particular term). A **course session** represents a unique instructional occurrence within a course section. The difference between a course “section” and a course “session” occurs primarily in non-credit courses.

This report uses course sessions instead of course sections because it is believed by the authors of the report to capture all enrollments in both DE and non-DE and therefore, presents what is thought to be a more accurate description of what is occurring in the system.

The Growth in Distance Education Instruction

Comparison of Growth in Distance Education and Non-Distance Education
1995 - 2000

Academic Year	Total DE Courses	Total DE Sections	Total DE Sessions	Total Non-DE Sessions	Percentage DE Course Sessions
95-96	1,562	2,138	2,710	427,054	.63%
96-97	2,024	3,161	3,907	454,766	.86%
97-98	2,322	3,601	4,555	481,171	.95%
98-99	2,888	4,008	4,959	496,941	1.00%
99-00	3,979	5,301	6,052	505,863	1.20%

As can be seen from the above table, the growth in distance education offerings is dwarfed by the growth in non-distance education offerings and distance education offerings remain a very small percentage of overall offerings at the colleges.

Distance Education Sessions
1995 - 2000

Academic Year	Course Sessions Offered	Credit Transferable Sessions	Percentage Credit Transferable	Credit Non-Transferable Sessions	Percentage Credit Non-Transferable	Noncredit Non-Transferable Sessions	Percentage Noncredit Non-Transferable
95-96	2,710	2,313	85.4%	353	13.0%	44	1.6%
96-97	3,907	3,389	86.7%	436	11.2%	82	2.1%
97-98	4,555	3,912	85.9%	546	12.0%	97	2.1%
98-99	4,959	4,217	85.0%	636	12.8%	106	2.1%
99-00	6,052	4,898	80.9%	943	15.6%	211	3.5%

Most course sessions of distance education remain credit transferable offerings.

Distance Education Noncredit and Non-Distance Education/Noncredit Course Sessions
1995-1996 through 1999-2000

Fiscal Years	Distance Education/ Noncredit course sessions	Non-Distance Education/ Noncredit course sessions	Percentage
1995-96	44	37,225	.11%
1996-97	82	39,418	.21%
1997-98	97	43,017	.22%
1998-99	106	44,926	.24%
1999-2000	211	47,607	.44%

Distance Education Courses still represent a very small percentage of all non-credit offerings.

Types of Distance Education Courses

The study identifies nine basic types of DE courses by delivery method (as defined in the MIS Data Element Dictionary). **Televised instruction is still the predominant delivery mode for DE in the California Community Colleges.** Televised instruction is reported using the DED Code #80. This data element includes primarily telecourses, television, and cable, but also includes videocassette, teleconferencing, satellite, and live instructional television.

MIS Data Element Dictionary Definitions for Distance Education Delivery Methods

- 51 = Two-way interactive video and audio
- 52 = One-way interactive video and two-way interactive audio
- 53 = Two-way interactive audio only
- 54 = Other simultaneous interactive medium not coded above
- 30 = Session under supervision of instructor not available by line of sight using medium where the content varies depending upon student response without the immediate involvement of the instructor (e.g. various types of instructional software, Computer Assisted Instruction CAI; digitized visual, audio or text selected in response to student input; or specially structured audio tapes, etc.)
- 60 = Text one-way (e.g. newspaper, correspondence, electronic file, **Internet**, etc.)
- 70 = Audio one-way (e.g. audio cassette, radio, etc.)
- 80 = Video one-way (e.g. **Instructional Television**, video cassette, etc.)
- 81 = Other passive medium not coded above

Number of Distance Education Courses by Type of Delivery Method

1995-1996 to 1999-2000

Fiscal Years	51	52	53	54	30 student response	60 Internet	70	80 televised	#81
1995-96	18	36	4	15	327	9	154	2,143	4
1996-97	31	76	9	41	487	7	319	2,932	5
1997-98	127	84	9	42	648	45	325	3,268	7
1998-99	207	103	7	55	902	328	342	2,986	29
1999-00	213	229	0	130	1,222	1,101	348	2,710	99

1999-2000

Percentages by Type

	Number of Courses	Percentage of Total
Two-way interactive video/audio	213	3.5%
One-way interactive video/two way interactive audio	229	3.8%
Two-way interactive audio only	0	0.0%
Other interactive	130	2.1%
Instructional software, CAI, structured tapes	1,222	20.1%
Internet, correspondence, newspaper	1,101	18.2%
Audio one-way	348	5.8%
Instructional Television, video cassette	2,710	44.8%
Other passive medium	99	1.6%

Instruction Television continues to be the dominant force in distance education, followed by instructional software and internet offerings.

Unduplicated Head Count

The following table summarizes the **unduplicated head count** of students enrolled in DE and non-DE and the percent represented by DE students.

Total Student Enrollment in All Distance Education and Non-Distance Education Course Sessions

1995-1996 to 1999-2000

Fiscal Years	Distance Education	Non-Distance Education	Percent of Total Enrollments
1995-96	54,524	2,108,121	2.52%
1996-97	67,509	2,230,404	2.94%
1997-98	75,941	2,335,600	3.15%
1998-99	87,302	2,425,560	3.47%
1999-00	104,153	2,528,266	3.96%

These numbers only indicate the number of students taking courses by each mode. It does not represent the percentage of full-time equivalent students taking distance education courses. These percentages are likely to be lower since students tend to take only one distance education course. It should also be noted that the number of students in California community colleges exceeded 2.5 million in 1999-2000.

Total Student Enrollment in Distance Education Noncredit and Non-Distance Education/Noncredit Sessions

1995-1996 to 1999-2000

Fiscal Years	Distance Education Noncredit	Non-Distance Education Noncredit	Distance Education Percent of Total Noncredit
1995-96	2,681	478,918	0.56 %
1996-97	6,561	518,077	1.25 %
1997-98	6,181	551,888	1.10 %
1998-99	6,345	576,667	1.08 %
1999-00	3,256	658,995	0.49 %

Noncredit offerings remain almost entirely in the non-distance education mode.

Completion Rates in Distance Education Course Sessions

Completion Rates for Credit Distance Education

1995 - 2000

Credit Distance Education Sessions						
Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00	Average
Completed	53,243	59,944	67,977	76,935	91,794	69,979
Not Completed	49,364	56,471	64,118	72,749	79,598	64,460
Total	102,607	116,415	132,095	149,684	171,392	134,439
Rate of Completion	52%	51%	51%	51%	54%	52%
Credit Non-Distance Education Sessions						
Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00	Average
Completed	5,762,540	6,008,887	6,285,404	6,590,307	6,614,558	6,252,339
Not Completed	3,126,095	3,262,761	3,453,603	3,567,776	3,764,690	3,434,985
Total	8,888,635	9,271,648	9,739,007	10,158,083	10,379,248	9,687,324
Rate of Completion	65%	65%	65%	65%	64%	65%

Completion Rates in 1999-00

	Credit DE	Percentage	Credit Non-DE	Percentage
Completed	91,794	54%	6,614,558	64%
Not Completed	79,598	46%	3,714,690	36%
Total	171,392		10,379,248	

Rates of Completion are considerably lower in Distance Education Credit Sessions than in Non-Distance Education Credit Sessions. Only 1.4% of completions came from the Distance Education sessions – 98.6% came from students taking courses in the traditional manner.

Overall Completion Rates for Distance Education and Non-Distance Education Noncredit

1995-2000

Distance Education Noncredit						
Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00	Average
Completed	3,677	11,201	9,527	9,004	2,288	7,139
Not Completed	1	21	6	14	1,531	315
Total	3,678	11,222	9,533	9,018	3,819	7,454
Rate of Completion	99.9%	99.8%	99.9%	99.9%	60%	91.9%
Non-Distance Education Noncredit						
Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00	Average
Completed	1,373,042	1,444,830	1,590,752	1,709,797	1,937,265	1,611,137
Not Completed	108,751	119,439	132,399	156,937	179,700	139,445
Total	1,481,793	1,564,269	1,723,151	1,866,734	2,116,965	1,750,582
Rate of Completion	93%	92%	92%	92%	92%	92.2%

It is not clear from the report how non-completions are computed in non-credit instruction. I will not report further on non-credit completion rates.

Student Enrollment and Completion Rate by Age in Distance Education Credit Course Sessions

1995 to 2000

Age	Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00
<18	Completed	1,134	1,531	1,872	2,670	3,278
	Not Completed	1,392	1,705	2,113	2,378	2,464
	Total	2,526	3,236	3,985	5,048	5,742
	Rate of Completion	45%	47%	47%	53%	57%
18 & 19	Completed	6,385	7,556	9,155	10,865	12,762
	Not Completed	9,021	10,895	13,257	15,202	15,421
	Total	15,406	18,451	22,412	26,067	28,183
	Rate of Completion	41%	41%	41%	42%	45%
20 – 24	Completed	13,335	15,152	17,115	19,873	23,792
	Not Completed	16,043	17,818	20,481	23,714	26,360
	Total	29,378	32,970	37,596	43,587	50,152
	Rate of Completion	45%	46%	46%	46%	47%
25 – 29	Completed	8,979	9,920	11,316	11,767	13,991
	Not Completed	8,279	9,226	10,093	10,874	12,282
	Total	17,258	19,146	21,409	22,641	26,273
	Rate of Completion	52%	52%	53%	52%	53%
30 - 34	Completed	7,577	8,124	8,427	9,405	10,890
	Not Completed	5,570	5,903	6,076	6,673	7,516
	Total	13,147	14,027	14,503	16,078	18,406
	Rate of Completion	58%	58%	58%	58%	59%
35 – 39	Completed	6,433	6,627	7,590	8,223	9,516
	Not Completed	4,007	4,596	4,726	5,328	5,636
	Total	10,440	11,223	12,316	13,551	15,152
	Rate of Completion	62%	59%	62%	61%	63%
40 - 49	Completed	7,279	8,559	9,498	10,449	12,998
	Not Completed	4,032	4,920	5,596	6,493	7,301
	Total	11,311	13,479	15,094	16,942	20,299
	Rate of Completion	64%	64%	63%	62%	64%
50 +	Completed	2,088	2,451	2,994	3,660	4,490
	Not Completed	1,000	1,389	1,770	2,077	2,555

	Total	3,088	3,840	4,764	5,737	7,045
	Rate of Completion	68%	64%	63%	64%	64%
Unknown	Completed	33	24	10	23	77
	Not Completed	20	19	6	10	63
	Total	53	43	16	33	140
	Rate of Completion	62%	56%	63%	70%	55%

1999-2000 Credit Completion by Age

	<18	18&19	20-24	25-29	30-34	35-39	40-49	50+	Unknown
Completed	3,278	12,762	23,792	13,991	10,890	9,516	12,998	4,490	77
Not Completed	2,464	15,421	26,360	12,282	7,516	5,636	7,301	2,555	63
Total	5,742	28,183	50,152	26,273	18,406	15,152	20,299	7,045	140
Percent	57%	45%	47%	53%	59%	63%	64%	64%	55%

Completion rates tend to increase with the age of the student. This illustrates, once again, how important motivation and self-discipline contribute to success in distance education courses.

Student Enrollment and Completion Rate by Type of Disability in Credit Course Sessions 1995 to 2000

Disability	Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00
Acquired Brain Injury Learner	Completed	44	60	44	72	96
	Not Completed	137	119	136	142	108
	Total	181	179	180	214	204
	Rate of Completion	24%	34%	24%	37%	47%
Developmentally Delayed Learner	Completed	5	28	33	26	25
	Not Completed	79	77	119	75	57
	Total	84	105	152	101	82
	Rate of Completion	6%	27%	22%	26%	31%
Hearing Impaired Learner	Completed	27	23	50	72	68
	Not Completed	76	77	67	133	89
	Total	103	100	117	205	157
	Rate of Completion	26%	23%	43%	35%	43%
Learning Disabled Learner	Completed	513	577	625	792	792
	Not Completed	941	881	970	1,058	1,114
	Total	1454	1458	1595	1,850	1,906
	Rate of Completion	35%	40%	39%	43%	43%
Mobility Impaired Learner	Completed	426	382	514	462	543
	Not Completed	629	566	706	688	520
	Total	1055	948	1220	1150	1063
	Rate of Completion	40%	40%	42%	40%	51%
Other Disabled Learner	Completed	226	290	294	356	423
	Not Completed	587	492	506	783	580
	Total	813	782	800	1139	1003
	Rate of Completion	28%	37%	37%	31%	42%
Psychological Disabled Learner	Completed	131	168	135	169	267
	Not Completed	272	227	347	350	278
	Total	403	395	482	519	545
	Rate of Completion	33%	42%	28%	33%	49%
Speech/Language Impaired Learner	Completed	9	6	21	20	13
	Not Completed	29	16	56	20	31
	Total	38	22	77	40	44
	Rate of Completion	24%	28%	27%	50%	30%
Visually Impaired Learner	Completed	33	57	65	57	75
	Not Completed	132	84	61	66	77
	Total	165	141	126	123	152
	Rate of Completion	20%	40%	37%	46%	49%

The number of persons with a mobility disability who completed a course via DE in 1999-2000 was 543. How many of these students also took classes on campus is unknown.

**Student Enrollment and Completion Rate by Ethnicity in Credit DE Course Sessions
1995 to 2000**

Ethnicity	Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00
Asian/Pacific Islander	Completed	6,724	7,475	8,302	9,703	12,462
	Not Completed	4,313	4,638	5,276	6,520	8,274
	Total	11,037	12,113	13,578	16,223	20,736
	Rate of Completion	61%	62%	61%	60%	60%
Black	Completed	5,107	5,149	5,945	6,128	6,701
	Not Completed	7,076	7,335	8,282	8,717	8,342
	Total	12,183	12,484	14,227	14,845	15,043
	Rate of Completion	42%	41%	42%	41%	45%
Filipino	Completed	1,514	1,509	1,591	1,892	2,309
	Not Completed	1,247	1,555	1,793	1,938	2,111
	Total	2,761	3,064	3,384	3,830	4,420
	Rate of Completion	55%	50%	47%	49%	52%
Hispanic	Completed	7,234	8,346	9,788	11,020	13,031
	Not Completed	9,064	10,696	12,028	13,730	14,201
	Total	16,298	19,042	21,816	24,750	27,232
	Rate of Completion	44%	44%	45%	45%	48%
Native American	Completed	661	659	825	895	923
	Not Completed	959	1,074	1,173	1,137	1,133
	Total	1,620	1,733	1,998	2,032	2,056
	Rate of Completion	41%	38%	41%	44%	45%
Other	Completed	882	1,063	1,274	1,363	1,694
	Not Completed	1,052	1,254	1,465	1,561	1,610
	Total	1,934	2,317	2,739	2,924	3,304
	Rate of Completion	46%	46%	47%	47%	52%
White	Completed	29,182	33,370	37,193	41,063	46,648
	Not Completed	24,038	27,619	31,071	34,453	35,404
	Total	53,220	60,989	68,264	75,516	82,052
	Rate of Completion	55%	55%	55%	54%	57%
Unknown/declined	Completed	1,939	2,373	3,059	4,871	8,026
	Not Completed	1,615	2,300	3,030	4,693	8,523
	Total	3,554	4,673	6,089	9,564	16,549
	Rate of Completion	55%	51%	50%	51%	49%

1999-2000 Completion Rates by Ethnicity

	Asian/ Pac.Islander	Black	Filipino	Hispanic	Native American	Other	White	Unknown
Completed	12,462	6,701	2,309	13,031	923	1,694	46,648	8,026
Not Completed	8,274	8,342	2,111	14,201	1,133	1,610	35,404	8,523
Total	20,736	15,043	4,420	27,232	2,056	3,304	82,052	16,549
Rate of Completion	60%	45%	52%	48%	45%	52%	57%	49%

Student Enrollment and Completion Rate by Gender in Distance Education Credit Course Sessions
1995 to 2000

Gender	Student Outcome	1995-96	1996-97	1997-98	1998-99	1999-00
Female	Completed	35,280	40,022	45,566	51,146	59,474
	Not Completed	30,960	35,835	40,083	45,075	49,042
	Total	68,139	77,756	87,548	98,120	110,515
	Rate of Completion	52%	52%	52%	52%	54%
Male	Completed	17,797	19,741	22,234	25,516	31,963
	Not Completed	18,278	20,531	23,924	27,479	30,225
	Total	36,075	40,272	46,158	52,995	62,188
	Rate of Completion	49%	49%	48%	48%	51%
Unknown	Completed	166	181	177	273	357
	Not Completed	126	105	111	195	331
	Total	292	286	288	468	688
	Rate of Completion	52%	63%	62%	58%	52%

Student Perceptions

Reasons for Choosing Distance Education (Percentage “to a great extent”)

Reason	Percentage
Convenience	71
Fulfill requirement for AA/AS degree	57
Improve job skill/opportunities	54
Instructor reputation	36
Fulfill requirement for transfer	30
Personal interest	29
Other	24

The report notes that “Anecdotal evidence from the DE institutional survey suggest that most DE students are also concurrently enrolled in traditional, on-campus classes. The hope that new DE delivery technologies would attract those students living some distance from their community college campus appears to be unfounded.” It also notes that “the ability to fit courses into their daily schedule is the chief reason students take DE classes.”

Method of Student to Instructor Communication Outside of the Lecture (by Percentage)

	Very/Somewhat often	Occasionally	Seldom/Never
Phone (Instructor to student)	13.9	13.3	72.8
Telephone conference calls	5.9	3.8	90.2
E-mail	39.8	14.7	55.4
List-serve	8.7	4.5	86.8
Online bulletin board	18.5	6.3	75.3
Online reader-modem	5.7	2.2	92.2
Chat room	6.1	3.8	90.1
Fax	6.9	4.3	88.9
Mail	14.1	9.1	76.8
In person (office hours)	14.6	12.5	72.8
In person (midterm or final)	24.3	19.9	55.8
Videoconferencing	7.7	2.6	89.6
Other	6.1	2.9	91.1

Training of Faculty

How do colleges train its distance education faculty?

1997 to 2000

	1997-98	1998-99	1999-00	Average
Faculty's own initiative	44	70	63	59
Funded education	19	39	24	27
Flex session to develop distance ed.	27	52	54	44
Distance education course Manual	7	17	14	13
Faculty release time	13	28	25	22
Faculty training access for disabled	0	0	27	9
Other	16	29	22	22
No faculty-training program	0	0	1	0

Faculty Perceptions

How important are the following with regard to developing, teaching and delivering distance education courses at your college?

1997 to 2000

	1997-98		1998-99		1999-00		Average	
	Most	Least	Most	Least	Most	Least	Most	Least
Faculty compensation	10	2	19	5	13	3	14	3
Faculty training	20	1	29	7	40	3	30	4
Teaching load	9	2	20	4	20	0	16	2
Student learning	32	1	50	6	49	3	44	3
Articulation/Transfer	20	5	30	5	27	2	26	4
Fate-to-Face regulation	6	14	19	13	7	15	11	14
State apportionment formula	9	6	19	6	18	3	15	5
Institutional fund/resources distribution	6	3	16	7	19	1	14	4
Equipment/facility	15	2	27	5	23	4	22	4
Scheduling	12	3	19	5	13	4	15	4
Class size	2	2	12	0	13	2	9	1
Copy right/intellectual property right	8	4	14	2	23	2	15	3
Curriculum development/approval	19	1	31	7	33	3	28	4
Technical support	25	1	39	11	37	2	34	5
Other	0	2	1	0	10	0	4	1

The Faculty Selection Process for Distance Education Courses

1997 to 2000

	1997-98	1998-99	1999-00
Parallels that for campus-based courses	40	53	52
Differs from campus-based courses	2	5	1
Is not formalized	5	21	17

By regulation, the process of faculty selection for distance education should be the same as for non-distance education classes. These results may indicate that some districts are not adhering to the Title 5 regulations.

Perception of Costs

**Comparison of Continuing Cost for Distance Education with
Traditional Modes of Instruction?**

1997 to 2000

	97-98			98-99			99-00		
	Higher	About the Same	Lower	Higher	About the Same	Lower	Higher	About the Same	Lower
Equipment replacement/upgrade	15	27	3	37	27	4	32	28	3
Technology support	23	20	2	49	19	2	44	19	0
Faculty development	13	31	1	31	37	2	30	33	0
Faculty salary/benefit	4	39	2	4	63	4	4	56	2
Instruction supply	12	29	4	7	49	12	5	46	7
Curriculum course development	11	33	1	22	46	2	11	47	2
Course production	21	22	1	39	27	3	24	32	3

Comparing Classroom-based and Distance Education

The report notes that “When comparing classroom-based and distance instruction, faculty still indicate a strong belief that classroom-based instruction **is better in terms of the overall educational experience**. 54.1% felt the classroom was better in terms of the quality of student-teacher interaction, compared to 16.8% who felt distance learning was better. Similarly, 60.9% preferred the classroom for student-student interaction (versus 11% for distance). 48.7% felt the classroom experience was better for student completion rates, while only 8.7% felt this was true for distance instruction. While a significant percentage of faculty felt that the two modes were about the same in the ability to deliver content (47.6%), promote student learning (57.6%), and help students to succeed (56%), the percentage of faculty who believed that the classroom was better in each of these areas was about three times greater than those who favored distance instruction. The only area where the classroom and distance instruction received comparable ranking was in the evaluation of efficiency of learning, with 23.3% favoring the classroom and 26.6% favoring distance instruction (42.6% felt they were about the same).”

“In reporting communication with students, faculty reported three main methods that were used at least once a week: e-mail (69.5%), telephone (45.2%), and in-person office hours (45.7%).”

“Faculty reported that **three main barriers** to the success of DE students were **poor time management skills** (80.6% responded somewhat or significant barrier), **lack of self-motivation** (74.3% responded somewhat or significant barrier) and **insufficient language skills** (64.1% responded somewhat or significant barrier). Those same areas are often reported as barriers in classroom based instruction.”

“The two factors cited by faculty as the most significant barriers to the implementation of DE classes were inadequate faculty compensation and insufficient time for developing DE classes. 58.8% felt that inadequate faculty compensation and 58.0% felt that the lack of time for class development were somewhat or significant barriers. While 37.4% felt that the cost of implementing DE courses was not a significant barrier, 31.3% did not know enough on this issue to give a definitive answers. Minimum class size restrictions (53.2%) and administrative resistance (65%) were viewed as not being significant barriers to implementation of effective distance learning.”