American Society of Radiologic Technologists

The Community for Radiologic Technologists

Faculty Development Needs Assessment Survey Results

Details of the recent ASRT-sponsored Faculty Development Needs Assessment Survey have been constructed around three themes: demographics, educational program details and faculty development needs.

Select the links below to view the documents:

- Part 1: Demographics
- Part 2: Educational Program Details
- Part 3: Faculty Development Needs

As director of education at the ASRT, I wish to thank the members of the education community who responded to our request for information. I trust that this information is of value to all technologists with an interest in education.

Kevin Powers

Faculty Development Needs Assessment
Summary of Data: Part 1

In the spring of this year the ASRT Education Department took steps to survey the community of educators in the radiologic sciences in an attempt to identify strategies for improving ASRT resources and services to educators and students. With the assistance of Dr. Richard Harris, ASRT director of research, two "Faculty Needs Assessment" instruments were constructed. One survey instrument was targeted to survey educational program directors and full-time faculty, while the other instrument was constructed with part-time and adjunct faculty in mind.

Packets including a cover letter, multiple sets of both survey instruments and a pre-posted return envelope were mailed to more than 590 educational programs in radiography, radiation therapy, nuclear medicine and sonography. In addition to printed survey forms, electronic versions of each form were also made available on the ASRT Web site. A total of 721 full-time and 216 part-time surveys were returned for tabulation.

This is the first of three summaries of survey results; the focus of this summary is on demographics of the educator population. The second report will address recognition of differences among program types, numbers of full-time and part-time/adjunct faculty, trends associated with program applicants, salaries, academic achievement and weighting of the part-time/adjunct role in annual evaluations. A final report will summarize personal development activities, along with needs, wants and desires expressed by educators with the goal of enhancing student learning experiences and personal career development.

Document Links:
- Gender
- Marital Status
- Ethnicity
- Year Certified
- Year Born
- Years in Education
- Leaving the Profession
- Future Careers
- Summary and Conclusion

Do the data give us an opportunity to paint a picture of program directors, full-time, part-time and adjunct faculty? Here's what the data indicate: The predominant number of program directors, full, part-time and adjunct faculty are female, married, Caucasian and, for the most part, have been in the field for more than 20 years.
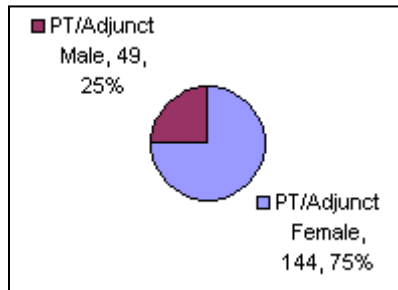
Gender: Program Directors and Full-time Faculty:

		Program Directors			Full-time Faculty		
		Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
	Female	210	29.1	69.1	246	34.1	81.2
	Male	94	13.0	30.1	57	7.9	18.8
	Total valid	304	51.8	100.0	303	40.7	100.0
	Blank	417	57.8		418	58.0	
	Total	721	100.0		721	100.0	
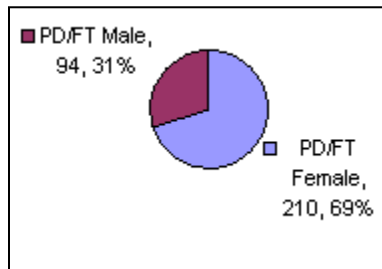
Gender: Part-time and Adjunct Faculty

	Frequency	Percent	Valid Percent
Female	144	66.7	77.3
Male	49	22.7	22.7
Total valid	193	90.4	100.0
Missing	23	10.6	
Total	216	100.0	

Marital Status: Program Directors and Full-time Faculty:

	Program Directors			Full-time Faculty		
	Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Life partner – male	1	.1	.3	0	.0	0.0
Married	226	31.3	74.6	210	29.1	68.0
Single	76	10.5	25.1	91	12.6	32.0
Total valid	303	42.0	100.0	309	100.0	100.0
Blank	418	58.0		420	58.3	
Total	721	100.0		721	100.0	

Marital Status: Part-time and Adjunct Faculty

	Frequency	Percent	Valid Percent
Married	155	71.8	80.3
Single	38	17.6	19.7
Total valid	193	90.4	100.0
Missing	23	10.6	
Total	216	100.0	100.0

Ethnicity: Program Directors and Full-time Faculty:

	Program Directors			Non-PD Full-time Faculty		
	Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
African-American	10	1.4	3.3	13	1.8	4.3
Asian/Pacific Islander	1	.1	.3	2	.3	.7
Caucasian	284	39.4	93.7	278	38.5	92.1
Hispanic	5	.7	1.7	7	1.0	2.3
Other	3	.4	.1	2	.3	.7
Total valid	303	42.0	100.0	302	41.9	100.0
Missing	418	58.0		419	58.1	
Total	721	100.0		721	100.0	

Ethnicity: Part-time and Adjunct Faculty

	Frequency	Percent	Valid Percent
African-American	3	1.4	1.5
Asian/Pacific Islander	1	.5	0.5
Caucasian	187	86.5	95.9
Hispanic	3	1.4	1.5
Other	1	.5	0.5
Total valid	195	90.3	100.0
Missing	21	9.7	
Total	216	100.0	

Year Certified: Program Directors and Full-time Faculty:

	Program Directors				Non-Program Directors Full-time Faculty			
	Year obtained (R) certification	Year obtained (T) certification	Year obtained (N) certification	Year obtained (S) certification	Year obtained (R) certification	Year obtained (T) certification	Year obtained (N) certification	Year obtained (S) certification
N Valid	331	50	37	9	304	16	18	9
Missing	390	671	684	712	417	705	703	712
Mean	1984.02	1984.68	1983.46	1986.56	1983.80	1984.63	1984.33	1994.44
Median	1977.38(a)	1986.00(a)	1983.00(a)	1985.00(a)	1983.85(a)	1983.00(a)	1984.50(a)	1995.25(a)
Mode	1974	1994	1976	1983	1974(b)	1967(b)	1989	1995(b)
Std. Deviation	106.065	10.013	9.054	6.839	10.550	10.887	7.889	3.504
Minimum	5744	5746	5767	5778	5734	5767	5772	5788
Maximum	7700	5801	5801	5800	5803	5802	5798	5799

Year Certified: Part-time and Adjunct Faculty

		Year obtained (R) certification	Year obtained (T) certification	Year obtained (N) certification	Year obtained (S) certification	Year obtained (M) certification*
N	Valid	174	16	13	6	32
	Missing	42	200	203	210	184
Mean		1985.68	1984.06	1987.85	1995.33	1993.75
Median		1987.00(a)	1984.00(a)	1990.00(a)	1996.00(a)	1993.33
Mode		1994	1981(b)	1985(b)	1987(b)	1992
Std. Deviation		10.752	9.685	10.984	5.888	4.024
Minimum		1951	1965	1967	1987	1984
Maximum		2002	1997	2001	2002	2003

*Not specifically asked, but mentioned by 34 respondents (32 of whom indicated in which year obtained).

Year Born: Program Directors and Full-time Faculty

Participants were asked to identify the year in which they were born. The mean age for Program Directors, full- and part-time/adjunct faculty was found to fall in the mid to late forties.

		Year of birth of PD	Year of birth of full-time Faculty member (not Program Director)
N	Valid	367	301
	Blank	354	420
Mean		1955.3161	1960.4485
Median		1954.6571	1960.1364
Mode		1954.00	1954.00
Std. Deviation		8.32327	8.99749
Minimum		1920.00	1937.00
Maximum		1979.00	1979.00

Mean age of Program Directors = 49.4 years; of non-Program Directors Full-time faculty, 44.3 years.

Year Born: Part-time and Adjunct Faculty

N	Valid	196
	Missing	20
Mean		1960.5357
Median		1961.6429(a)
Mode		1959.00
Std. Deviation		9.82272
Minimum		1926.00
Maximum		1978.00

Mean age = 43.75 years

Years in Education: Program Directors and Full-time Faculty

Participants were asked to identify how long they had been involved in student education as well as identify how long they had been in their current position.

		Program Directors		Full-time Faculty (not Program Directors)	
		Consecutive years in current position?	Years involved in student education?	Consecutive years in current position?	Years involved in student education?
N	Valid	375	387	326	334
	Blank	346	334	395	387
Mean		9.9787	16.7829	7.1061	10.8626
Median		7.4643(a)	16.6190	4.0217	9.1053
Mode		1.00	20.00	1	3.00
Std. Deviation		8.57521	9.58163	7.23204	9.43010
Minimum		.00	.00	.00	.00
Maximum		40.00	43.00	35.00	65.99

Years in Education: Part-time and Adjunct Faculty

		Consecutive years in current position	Years involved in student education
N	Valid	196	153
	Missing	20	18
Mean		5.5986	5.4575
Median		3.7353(a)	3.3929(a)
Mode		1.00	1.00
Std. Deviation		5.52588	5.55770
Minimum		.00	.00
Maximum		29.00	25.00

Of particular interest here is the distribution of years of experience of the part-time and adjunct faculty. Over one-third of the respondents indicated they have been in their current position for two years or less. Close to two-thirds of the population have fewer than five years experience. Approximately 15 percent of this group report having ten years or more experience in their current position.

This raises questions for further assessments, in particular: Are there successful strategies that promote the retention of part-time and adjunct faculty that others could benefit from? Do program officials find they are on a constant cycle of recruitment, orientation and training of part-time and adjunct faculty? Are there outside resources needed to assist technologists to assume the role of part-time and adjunct faculty?

Years in Current Position: Part-time and Adjunct Faculty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 – 2 years	74	34.7	38.3	38.3
	3 – 5 years	51	23.6	26.0	64.3
	6 – 10 years	40	18.5	20.4	84.7
	11 – 15 years	19	8.8	9.7	94.4
	16 – 20 years	7	3.2	3.6	98.0
	21 – 30 years	1	1.9	2.0	100.0
	Total	196	90.7	100.0	
Missing	years in position > years educating students	7	3.2		
	System	13	6.0		
	Total	20	9.3		
Total		216	100.0		

Years in Current Position

6-10yrs, 40, 21%
11-15yrs, 19, 10%
3-5yrs, 51, 26%
16-20yrs, 7, 4%
21-30, 1, 1%
0-2yrs, 74, 38%

Legend: 0-2yrs, 3-5yrs, 6-10yrs, 11-15yrs, 16-20yrs, 21-30
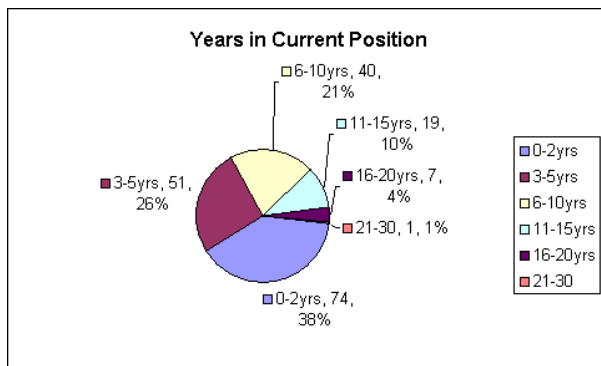
Titles or Positions: Part-time and Adjunct Faculty

	Frequency	Percent	Valid Percent
Adjunct Faculty	66	30.6	32.4
Clinical Coordinator	15	6.9	7.4
Clinical Instructor	104	48.1	51.0
Clinical Instructor, Adjunct faculty	2	0.9	1.0
Clinical Instructor, Clinical Coordinator	1	0.5	0.5
Other	16	7.4	7.8
Total valid	204	94.4	100.0
Missing	12	5.6	
Total	216	100.0	100.0

"Other" positions specified:

| |
|---|
| Academic instructor |
| Adjunct clinical evaluator |
| Adjunct clinical instructor |
| Associate chair |
| Classroom/ lab/ clinical instruct |
| Clinical supervision |
| Didactic faculty (Part-time) |
| Didactic instructor |
| Director |
| Director of program – radiography |
| Imaging educator - didactic and clinical responsibilities |
| Instructor |
| Instructor faculty |
| Instructor/didactic |
| Lab instructor clinical coordinator |
| Lab instructor lab supervisor |
| Laboratory assistant |
| Part time instructor |
| Part time instructor teach image production |
| Part time instructor/ clinical coordinator |
| Program director |
| Program director department head |
| Radiation physicist instructor |

Leaving the Profession

When asked to identify in how many years they plan to leave R.T. education approximately one-fourth of Program Directors indicated they plan on leaving in five years or less. Slightly less, about one in five full-time faculty, plan on leaving education within five years; almost one-third of part-time/adjunct faculty plan to leave education in the same period. Over the next ten years the cumulative forecast is that about half of the current Program Directors, slightly less than half of the full-time faculty and over half of the current part-time/adjunct faculty positions, will need to be filled due to individuals leaving education.

This begs the questions that arose earlier: Are there strategies to promote or enhance educator retention? What resources are available or need to be created that inform, promote and encourage technologists to consider education as a career option? What resources are available to assist technologists in preparing for a successful transition to the classroom or to assume a lead role as educator in the clinical setting?

Leaving the profession: Program Directors and Full-time Faculty
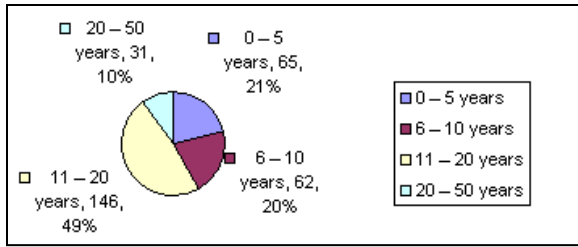
Program Directors	Full-time Faculty
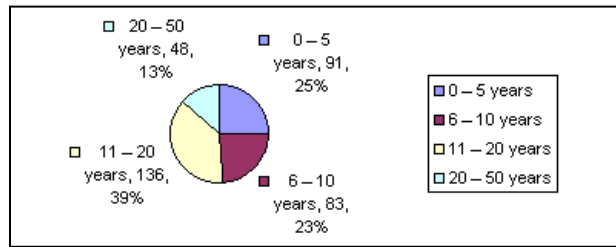
		Program Directors	**Full-time Faculty**
N	Valid	285	260
	Missing	436	461
Mean		11.0035	13.1577
Median		9.7857(a)	11.4545(a)
Mode		10.00	20.00
Std. Deviation		7.73254	8.40999
Minimum		.00	.00
Maximum		45.00	50.00

	Program Directors			Full-time Faculty		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
0 – 5 years	91	25.4%	25.4	65	21.4%	21.4
6 – 10 years	83	23.2%	48.6	62	20.4%	41.8
11 – 20 years	136	38.0%	88.6	146	48.0%	89.8
20 – 50 years	48	13.4%	100.0	31	10.2%	100.0
Total Valid	358	100.0		304		
Blank	363			417		
Total	721			721		

Leaving the Profession: Part-time and Adjunct Faculty

N	Valid	140
	Missing or question mark	76
Mean		12.7429
Median		10.4857(a)
Mode		10.00
Std. Deviation		9.51664
Minimum		.00
Maximum		50.00

Planning to leave R.T. education within next three years: 17.1 percent.
Planning to leave R.T. education within next five years: 30.0 percent.
Planning to leave R.T. education within next 10 years: 55.0 percent.

Future Careers

Looking at the responses to the question of "If leaving education other than retirement, what will be your new career?" the future career challenges were as diverse and interesting as one could imagine. Here are a few select examples:

Program Directors
Administration
Administration at the executive level
Administrator in education
Applications or sales
Bioanthropology and radiology
College administration
Collegiate instructor
Consultation
Distance learning professor from home
Education or PACS administrator
Health care law
Human resources
Teach psychology part-time
Out of medicine, into selling real estate
Physician assistant
Research/clinical trials
Sales or educational development for equipment
Self-employed
Small business owner
Something fun!
Would like government position in public health
Writer
Yarn store owner

Full-time Faculty
After retirement may do PRN in diagnostic radiology
College professor
Counselor in the public school setting
Executive director of a professional organization
Full time mother/wife
Hopefully open own business
Law
Medical office, flower shop, library bookstore
Non health care
Part-time radiation therapist or clinical supervisor
Patient Care advocate
Personal
Part-time work
Real estate/stay at home mom
Retirement, otherwise something unrelated to health
Sales
Seek position as program director
Teach in another discipline (humanities)
Technologist in orthopedic office
Work part time in general radiography

Part-time/Adjunct Faculty
Writing and consulting
Elementary education
K-12 science teacher
Self employed
A new restaurant, "The Soup Kitchen"
Traveling temp tech
Full-time biology teacher (H.S.)

Summary and Conclusion

Survey data reflect a population of educators that is mostly female, mostly 40 or more years old with approximately half of their 20 year's experience in the field being dedicated to education for program directors and full-time faculty. Part-time and adjunct faculty indicate one quarter or fewer years of their overall experience being involved in student education. Attrition, due to retirement or career change, will peak within five to ten years, with vacancies for part-time and adjunct faculty occurring earlier than program directors or full-time faculty. This loss of seasoned talent will place demands on existing programs to compete in the market for technologists to fill these vacancies as well as create opportunities for advancement or career transition for existing technologists.

What "Faculty Development Needs" arise from this assessment? First there must be a forward looking vision that will embrace change in the educator community. Combined with this is the need to create enthusiasm and interest in education as a career pathway for technologists. Finally there needs to be an effort to harvest resources that have been proven successful in supporting technologists in making the transition to a teaching position in the classroom or clinical setting. This must be combined with methodologies to promote the retention of educators. These resources and methodologies need to be made easily accessible to the individuals, programs and communities of interest to promote their use.

The second summary report will address recognition of program types, numbers of full-time and part-time/adjunct faculty, trends associated with program applicants, salaries, academic achievement and weighting of the part-time/adjunct role in annual evaluations.

Faculty Development Needs Assessment
Summary of Data: Part 2

In the spring of 2004 the ASRT Education Department surveyed the radiologic science educator community in an attempt to identify strategies for improving ASRT resources and services to educators and students. With the assistance of Dr. Richard Harris, ASRT director of research, two "Faculty Needs Assessment" instruments were constructed. One survey instrument was targeted to educational Program Directors (PDs) and full-time faculty, while the other instrument was constructed with part-time and adjunct faculty in mind. A total of 721 full-time and 216 part-time surveys were returned for tabulation.

This is the second of three summaries of survey results. The first summary focused on demographics of the educator population: gender, age, marital status, ethnicity, years of experience and projections of years until retirement. This second report addresses recognition of differences among program types, numbers of full-time and part-time/adjunct faculty, trends associated with program applicants, salaries, academic achievement and weighting of part-time/adjunct role in annual evaluations. A final report will summarize personal development activities, along with needs, wants and desires expressed by educators with the goal of enhancing student learning experiences and personal career development.

In the development of the survey instruments, a decision was made to tailor two flavors of survey items: one directed to PDs and full-time faculty, the other for part-time and adjunct faculty. The "Program and Professional Profile" section for the PD/full-time faculty instrument consisted of slightly different survey fields for PDs than full-time faculty. PDs were asked to provide data such as type of program, number of full-time and part-time faculty and student enrollment data. These items were not included in the full-time section of "Program and Professional Profile" questions.

Because of the variations in survey instruments, this summary will begin with data recruited from PDs only, followed by data common to all parties and end with data unique to part-time and adjunct faculty.

Document Links
- Program Structure
- Number of Faculty/Program
- Student Enrollment and Enrollment Trends
- Salaries
- Clinical Practice
- Academic Achievement
- PT and Adjunct Only Data
- Summary and Conclusion

Program Structure:

The listing of program descriptions shows that single program sponsors (radiography, radiation therapy, nuclear medicine) are most common. Radiography was included as one of the most frequent offering of programs identified as sponsoring education in multiple modalities.

Which of the following best describes your program? (...check all that apply)

	Frequency	Percent	Valid Percent
NM	22	3.1	6.7
NM, S, Other	2	.3	.6
Other	1	.1	.3
R	210	29.1	64.4
R, NM	1	.1	.3
R, RTT, NM, S	1	.1	.3
R, RTT, S Other	1	.1	.3
R, NM, S	4	.6	1.2
R, NM, S, Other	1	.1	.3
R, Other	5	.7	1.5
R, RTT	4	.6	1.2
R, RTT, NM	3	.4	.9
R, RTT, NM, S	5	.7	1.5
R, RTT, NM, S, Other	4	.6	1.2
R, RTT, S	2	.3	.6
R, S	14	1.9	4.3
R, S, Other	6	.8	1.8
RTT	35	4.9	10.7
RTT, NM	1	.1	.3
S	4	.6	1.2
Total Valid	326	45.2	100.0
Blank	395	54.8	
Total	721	100.0	

Please note: Full-time faculty were instructed to skip questions dealing with general program information resulting in the sizable tally of 395 "Blank" responses indicated in the summary tables.

The associate degree was found to be the most frequent program structure, accounting for approximately 50% of reported educational programs. Two-year certificate programs make up the next most common program structure (25%), with approximately one in five (16 of 85) of the certificate programs indicating that they are affiliated or linked to a college.

Bachelor degree PDs were asked to identify how general education is integrated into the program structure. Thirty of the forty-nine Bachelor's programs structure general education delivery prior to specialty specific course work, two programs report structuring general education after specialty specific course work, while 17 programs integrate general education along with specialty specific courses.

Which of following best describes your program structure?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-year certificate program	22	3.1	6.9	6.9
	2-year certificate program	69	9.6	21.5	28.3
	2-year certificate program linked to a college	16	2.2	5.0	33.3
	Associate degree program	161	22.3	50.2	83.5
	BS with general education prior to specialty-specific	30	4.2	9.3	92.8
	BS with general education after specialty-specific	2	.3	.6	93.5
	BS w integrated general ed, spec-specif	17	2.4	5.3	98.8
	Other	4	.6	1.2	100.0
	Total	321	44.5	100.0	
Missing	System	400	55.5		
Total		721	100.0		

Number of Faculty/Program:

Full-time program faculty numbers per program were reported as:
      Radiography: 3 (mean = 2.89)
      Radiation Therapy: 2 (mean = 1.45)
      Nuclear Medicine: 2 (mean = 1.75)
      Sonography: 2 (mean = 1.75)

Program areas(s) as described if consistent with student enrollment			Full-time faculty who teach radiography	Full-time faculty who teach radiation therapy	Full-time faculty who teach nuclear medicine	Full-time faculty who teach sonography	Full-time faculty who teach other disciplines
Describe student enrollment inconsistent	N	Valid	39	39	39	39	39
		Missing	12	12	12	12	12
	Mean		2.69	.64	.69	1.13	.26
	Median		2.79(a)	.55(a)	.53(a)	.86(a)	.17(a)
	Mode		3	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		6	3	4	8	3
	Std. Deviation		1.417	.811	.977	1.472	.677
Radiography (1)	N	Valid	195	195	195	195	193
		Missing	48	48	48	48	50

Program areas(s) as described if consistent with student enrollment		Full-time faculty who teach radiography	Full-time faculty who teach radiation therapy	Full-time faculty who teach nuclear medicine	Full-time faculty who teach sonography	Full-time faculty who teach other disciplines
	Mean	2.89	.00	.01	.02	.08
	Median	2.45(a)	.(a)	.01(a)	.02(a)	.05(a)
	Mode	2	0	0	0	0
	Minimum	0	0	0	0	0
	Maximum	62	0	1	2	8
	Std. Deviation	4.434	.000	.101	.175	.710
Radiation therapy (2)	N Valid	29	29	29	29	29
	Missing	1	1	1	1	1
	Mean	.00	1.45	.00	.00	.00
	Median	.(a)	1.44(a)	.(a)	.(a)	.(a)
	Mode	0	1	0	0	0
	Minimum	0	0	0	0	0
	Maximum	0	3	0	0	0
	Std. Deviation	.000	.736	.000	.000	.000
Nuclear medicine (3)	N Valid	16	16	16	16	16
	Missing	1	1	1	1	1
	Mean	.25	.00	3.44	.00	.00
	Median	.25(a)	.(a)	1.75(a)	.(a)	.(a)
	Mode	0	0	1	0	0
	Minimum	0	0	0	0	0
	Maximum	4	0	15	0	0
	Std. Deviation	1.000	.000	4.131	.000	.000
Sonography (4)	N Valid	4	4	4	4	4
	Missing	0	0	0	0	0
	Mean	.00	.00	.00	1.75	.00
	Median	.(a)	.(a)	.(a)	1.67(a)	.(a)
	Mode	0	0	0	1	0
	Minimum	0	0	0	1	0
	Maximum	0	0	0	3	0
	Std. Deviation	.000	.000	.000	.957	.000
12	N Valid	4	4	4	4	4
	Missing	1	1	1	1	1
	Mean	4.00	1.00	.00	.00	.00
	Median	4.00(a)	.(a)	.(a)	.(a)	.(a)
	Mode	3(b)	1	0	0	0
	Minimum	3	1	0	0	0
	Maximum	5	1	0	0	0
	Std. Deviation	1.155	.000	.000	.000	.000
13	N Valid	1	1	1	1	1
	Missing	0	0	0	0	0
	Mean	2.00	.00	1.00	.00	.00
	Median	.(a)	.(a)	.(a)	.(a)	.(a)
	Mode	2	0	1	0	0

Program areas(s) as described if consistent with student enrollment		Full-time faculty who teach radiography	Full-time faculty who teach radiation therapy	Full-time faculty who teach nuclear medicine	Full-time faculty who teach sonography	Full-time faculty who teach other disciplines
	Minimum	2	0	1	0	0
	Maximum	2	0	1	0	0
14	N Valid	12	12	12	12	11
	Missing	1	1	1	1	2
	Mean	3.25	.00	.00	1.67	.09
	Median	3.14(a)	.(a)	.(a)	1.56(a)	.09(a)
	Mode	3	0	0	1	0
	Minimum	1	0	0	1	0
	Maximum	6	0	0	3	1
	Std. Deviation	1.357	.000	.000	.888	.302
15	N Valid	3	3	3	3	3
	Missing	1	1	1	1	1
	Mean	3.33	.00	.00	.00	.33
	Median	2.00(a)	.(a)	.(a)	.(a)	.33(a)
	Mode	1(b)	0	0	0	0
	Minimum	1	0	0	0	0
	Maximum	7	0	0	0	1
	Std. Deviation	3.215	.000	.000	.000	.577
34	N Valid	0	0	0	0	0
	Missing	1	1	1	1	1
123	N Valid	2	2	2	2	2
	Missing	0	0	0	0	0
	Mean	3.50	1.50	1.00	.00	.00
	Median	3.50(a)	1.50(a)	.(a)	.(a)	.(a)
	Mode	3(b)	1(b)	1	0	0
	Minimum	3	1	1	0	0
	Maximum	4	2	1	0	0
	Std. Deviation	.707	.707	.000	.000	.000
134	N Valid	4	4	4	4	4
	Missing	1	1	1	1	1
	Mean	2.25	.00	2.25	2.75	.00
	Median	2.25(a)	.(a)	2.33(a)	3.00(a)	.(a)
	Mode	2	0	3	3	0
	Minimum	2	0	1	1	0
	Maximum	3	0	3	4	0
	Std. Deviation	.500	.000	.957	1.258	.000
145	N Valid	4	4	4	4	4
	Missing	1	1	1	1	1
	Mean	11.75	.00	.00	2.00	5.00
	Median	5.00(a)	.(a)	.(a)	.(a)	2.00(a)
	Mode	2(b)	0	0	2	2
	Minimum	2	0	0	2	1
	Maximum	35	0	0	2	15
	Std. Deviation	15.586	.000	.000	.000	6.683
345	N Valid	2	2	2	2	2

Program areas(s) as described if consistent with student enrollment		Full-time faculty who teach radiography	Full-time faculty who teach radiation therapy	Full-time faculty who teach nuclear medicine	Full-time faculty who teach sonography	Full-time faculty who teach other disciplines
	Missing	0	0	0	0	0
	Mean	.00	.00	1.00	1.00	.50
	Median	.(a)	.(a)	.(a)	.(a)	.50(a)
	Mode	0	0	1	1	0(b)
	Minimum	0	0	1	1	0
	Maximum	0	0	1	1	1
	Std. Deviation	.000	.000	.000	.000	.707
1234	N Valid	3	3	3	3	3
	Missing	1	1	1	1	1
	Mean	3.33	1.00	2.00	2.33	.00
	Median	3.33(a)	1.00(a)	.(a)	2.33(a)	.(a)
	Mode	3	0(b)	2	1	0
	Minimum	3	0	2	1	0
	Maximum	4	2	2	5	0
	Std. Deviation	.577	1.000	.000	2.309	.000
1245	N Valid	1	1	1	1	1
	Missing	0	0	0	0	0
	Mean	3.00	1.00	.00	1.00	1.00
	Median	.(a)	.(a)	.(a)	.(a)	.(a)
	Mode	3	1	0	1	1
	Minimum	3	1	0	1	1
	Maximum	3	1	0	1	1
1345	N Valid	1	1	1	1	1
	Missing	0	0	0	0	0
	Mean	6.00	.00	2.00	2.00	8.00
	Median	.(a)	.(a)	.(a)	.(a)	.(a)
	Mode	6	0	2	2	8
	Minimum	6	0	2	2	8
	Maximum	6	0	2	2	8
12345	N Valid	2	2	2	2	2
	Missing	0	0	0	0	0
	Mean	4.00	2.00	1.50	2.50	3.00
	Median	4.00(a)	.(a)	1.50(a)	2.50(a)	.(a)
	Mode	3(b)	2	1(b)	2(b)	3
	Minimum	3	2	1	2	3
	Maximum	5	2	2	3	3
	Std. Deviation	1.414	.000	.707	.707	.000
Area(s) as described if inconsistent with student enrollment	N Valid	39	39	39	39	39
	Missing	12	12	12	12	12
	Mean	2.69	.64	.69	1.13	.26
	Median	2.79(a)	.55(a)	.53(a)	.86(a)	.17(a)
	Mode	3	0	0	0	0
	Minimum	0	0	0	0	0

Program areas(s) as described if consistent with student enrollment		Full-time faculty who teach radiography	Full-time faculty who teach radiation therapy	Full-time faculty who teach nuclear medicine	Full-time faculty who teach sonography	Full-time faculty who teach other disciplines
	Maximum	6	3	4	8	3
	Std. Deviation	1.417	.811	.977	1.472	.677

Note: 12, 123 etc. refers to sponsors of multiple specialties 1='s radiography, 2='s radiation therapy, 3='s nuclear medicine…. So 12='s a sponsor offering both radiography and radiation therapy.

Part-time program faculty numbers per program were reported as:
 Radiography: 3 (mean = 2.58)
 Radiation Therapy: 7 (mean = 6.43)
 Nuclear Medicine: 5 (mean = 4.31)
 Sonography: 2 (mean = 1.75)

Please enter the number of part-time faculty members who teach in each of these disciplines.

Program areas(s) as described if consistent with student enrollment			Part-time faculty who teach radiography	Part-time faculty who teach radiation therapy	Part-time faculty who teach nuclear medicine	Part-time faculty who teach sonography	Part-time faculty who teach other disciplines
Radiography (1)	N	Valid	194	195	194	195	195
		Missing	49	48	49	48	48
	Mean		2.58	.02	.02	.08	.24
	Median		1.23(a)	.02(a)	.02(a)	.03(a)	.04(a)
	Mode		0	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		40	1	2	7	30
	Std. Deviation		4.775	.123	.175	.574	2.288
Radiation Therapy (2)	N	Valid	29	28	29	29	29
		Missing	1	2	1	1	1
	Mean		.00	6.43	.14	.00	.00
	Median		.(a)	3.27(a)	.14(a)	.(a)	.(a)
	Mode		0	3	0	0	0
	Minimum		0	0	0	0	0
	Maximum		0	62	4	0	0
	Std. Deviation		.000	11.824	.743	.000	.000
Nuclear Medicine (3)	N	Valid	16	16	16	16	16
		Missing	1	1	1	1	1
	Mean		.19	.00	4.31	.00	.06
	Median		.19(a)	.(a)	.90(a)	.(a)	.06(a)
	Mode		0	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		3	0	50	0	1
	Std. Deviation		.750	.000	12.273	.000	.250
Sonography (4)	N	Valid	4	4	4	4	4
		Missing	0	0	0	0	0
	Mean		.00	.00	.00	1.75	.00
	Median		.(a)	.(a)	.(a)	2.00(a)	.(a)
	Mode		0	0	0	2	0
	Minimum		0	0	0	0	0
	Maximum		0	0	0	3	0
	Std. Deviation		.000	.000	.000	1.258	.000

Program areas(s) as described if consistent with student enrollment			Part-time faculty who teach radiography	Part-time faculty who teach radiation therapy	Part-time faculty who teach nuclear medicine	Part-time faculty who teach sonography	Part-time faculty who teach other disciplines
12	N	Valid	4	4	4	4	4
		Missing	1	1	1	1	1
	Mean		1.50	.25	.00	.00	.00
	Median		1.33(a)	.25(a)	.(a)	.(a)	.(a)
	Mode		0	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		4	1	0	0	0
	Std. Deviation		1.915	.500	.000	.000	.000
13	N	Valid	1	1	1	1	1
		Missing	0	0	0	0	0
	Mean		.00	.00	.00	.00	.00
	Median		.(a)	.(a)	.(a)	.(a)	.(a)
	Mode		0	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		0	0	0	0	0
14	N	Valid	12	12	12	12	11
		Missing	1	1	1	1	2
	Mean		3.50	.17	.00	1.42	.00
	Median		2.25(a)	.17(a)	.(a)	1.25(a)	.(a)
	Mode		1(b)	0	0	0(b)	0
	Minimum		0	0	0	0	0
	Maximum		12	2	0	3	0
	Std. Deviation		3.729	.577	.000	1.311	.000
15	N	Valid	3	3	3	3	3
		Missing	1	1	1	1	1
	Mean		1.00	.00	.00	.00	2.33
	Median		1.00(a)	.(a)	.(a)	.(a)	3.00(a)
	Mode		0(b)	0	0	0	0(b)
	Minimum		0	0	0	0	0
	Maximum		2	0	0	0	4
	Std. Deviation		1.000	.000	.000	.000	2.082
34	N	Valid	0	0	0	0	0
		Missing	1	1	1	1	1
123	N	Valid	2	2	2	2	2
		Missing	0	0	0	0	0
	Mean		1.00	1.00	.00	.00	.00
	Median		1.00(a)	.(a)	.(a)	.(a)	.(a)
	Mode		0(b)	1	0	0	0
	Minimum		0	1	0	0	0
	Maximum		2	1	0	0	0
	Std. Deviation		1.414	.000	.000	.000	.000
134	N	Valid	4	4	4	4	4
		Missing	1	1	1	1	1
	Mean		1.25	.00	.25	.25	.00

Program areas(s) as described if consistent with student enrollment		Part-time faculty who teach radiography	Part-time faculty who teach radiation therapy	Part-time faculty who teach nuclear medicine	Part-time faculty who teach sonography	Part-time faculty who teach other disciplines
	Median	1.00(a)	.(a)	.25(a)	.25(a)	.(a)
	Mode	1	0	0	0	0
	Minimum	0	0	0	0	0
	Maximum	3	0	1	1	0
	Std. Deviation	1.258	.000	.500	.500	.000
145	N Valid	4	4	4	4	4
	Missing	1	1	1	1	1
	Mean	1.75	.00	.00	.50	.75
	Median	1.67(a)	.(a)	.(a)	.50(a)	.75(a)
	Mode	3	0	0	0(b)	1
	Minimum	0	0	0	0	0
	Maximum	3	0	0	1	1
	Std. Deviation	1.500	.000	.000	.577	.500
345	N Valid	2	2	2	2	2
	Missing	0	0	0	0	0
	Mean	.00	.00	1.00	.00	2.00
	Median	.(a)	.(a)	1.00(a)	.(a)	2.00(a)
	Mode	0	0	0(b)	0	0(b)
	Minimum	0	0	0	0	0
	Maximum	0	0	2	0	4
	Std. Deviation	.000	.000	1.414	.000	2.828
1234	N Valid	3	3	3	3	3
	Missing	1	1	1	1	1
	Mean	1.33	1.00	.33	.33	.00
	Median	1.33(a)	1.00(a)	.33(a)	.33(a)	.(a)
	Mode	2	0(b)	0	0	0
	Minimum	0	0	0	0	0
	Maximum	2	2	1	1	0
	Std. Deviation	1.155	1.000	.577	.577	.000
1245	N Valid	1	1	1	1	1
	Missing	0	0	0	0	0
	Mean	.00	.00	.00	.00	.00
	Median	.(a)	.(a)	.(a)	.(a)	.(a)
	Mode	0	0	0	0	0
	Minimum	0	0	0	0	0
	Maximum	0	0	0	0	0
1345	N Valid	1	1	1	1	1
	Missing	0	0	0	0	0
	Mean	.00	.00	.00	6.00	.00
	Median	.(a)	.(a)	.(a)	.(a)	.(a)
	Mode	0	0	0	6	0
	Minimum	0	0	0	6	0
	Maximum	0	0	0	6	0

Program areas(s) as described if consistent with student enrollment			Part-time faculty who teach radiography	Part-time faculty who teach radiation therapy	Part-time faculty who teach nuclear medicine	Part-time faculty who teach sonography	Part-time faculty who teach other disciplines
12345	N	Valid	2	2	2	2	2
		Missing	0	0	0	0	0
	Mean		4.50	2.50	1.00	1.50	.50
	Median		4.50(a)	2.50(a)	.(a)	1.50(a)	.50(a)
	Mode		1(b)	2(b)	1	0(b)	0(b)
	Minimum		1	2	1	0	0
	Maximum		8	3	1	3	1
	Std. Deviation		4.950	.707	.000	2.121	.707
Area(s) as described if inconsistent with student enrollment	N	Valid	39	39	39	39	38
		Missing	12	12	12	12	13
	Mean		2.64	1.10	.08	.69	2.24
	Median		.95(a)	.28(a)	.08(a)	.30(a)	.08(a)
	Mode		0	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		21	16	1	7	81
	Std. Deviation		4.392	2.981	.270	1.559	13.132

Student Enrollment and Enrollment Trends:

Typical student enrollment numbers per program were reported as:
      Radiography: 29 (median = 28.08)
      Radiation Therapy: 13 (median = 13.00)
      Nuclear Medicine: 10 (median = 10.00)
      Sonography: 17 (median = 17.00)

Please note that median values are being used to reflect student enrollment. This is due in part to the low number of program types reported combined with a few programs reporting very high numbers of students enrolled (example sonography N=4,minimum enrollment=7, maximum enrollment=45, resulting in a mean=21.50).

Students enrolled in program during a typical academic session (e.g., semester, trimester)

Program areas(s) as described if consistent with student enrollment			Students in radiography	Students in radiation therapy	Students in nuclear medicine	Students in sonography	Students in another discipline
Radiography (1)	N	Valid	192	192	192	192	192
		Missing	51	51	51	51	51
	Mean		31.56	.00	.00	.00	.00
	Median		28.08(a)	.(a)	.(a)	.(a)	.(a)
	Mode		20(b)	0	0	0	0
	Minimum		0	0	0	0	0
	Maximum		90	0	0	0	0
	Std. Deviation		19.431	.000	.000	.000	.000
Radiation Therapy (2)	N	Valid	29	29	29	29	29
		Missing	1	1	1	1	1

Program areas(s) as described if consistent with student enrollment			Students in radiography	Students in radiation therapy	Students in nuclear medicine	Students in sonography	Students in another discipline
	Mean		.00	14.79	.00	.00	.00
	Median		.(a)	13.00(a)	.(a)	.(a)	.(a)
	Mode		0	5(b)	0	0	0
	Minimum		0	1	0	0	0
	Maximum		0	51	0	0	0
	Std. Deviation		.000	9.983	.000	.000	.000
Nuclear Medicine (3)	N	Valid	16	16	16	16	16
		Missing	1	1	1	1	1
	Mean		.00	.00	14.38	.00	.00
	Median		.(a)	.(a)	10.00(a)	.(a)	.(a)
	Mode		0	0	6(b)	0	0
	Minimum		0	0	2	0	0
	Maximum		0	0	50	0	0
	Std. Deviation		.000	.000	14.380	.000	.000
Sonography (4)	N	Valid	4	4	4	4	4
		Missing	0	0	0	0	0
	Mean		.00	.00	.00	21.50	.00
	Median		.(a)	.(a)	.(a)	17.00(a)	.(a)
	Mode		0	0	0	7(b)	0
	Minimum		0	0	0	7	0
	Maximum		0	0	0	45	0
	Std. Deviation		.000	.000	.000	17.330	.000
12	N	Valid	4	4	4	4	4
		Missing	1	1	1	1	1
	Mean		38.50	14.50	.00	.00	.00
	Median		40.50(a)	11.67(a)	.(a)	.(a)	.(a)
	Mode		23(b)	11	0	0	0
	Minimum		23	11	0	0	0
	Maximum		50	24	0	0	0
	Std. Deviation		12.124	6.351	.000	.000	.000
13	N	Valid	1	1	1	1	1
		Missing	0	0	0	0	0
	Mean		18.00	.00	2.00	.00	.00
	Median		.(a)	.(a)	.(a)	.(a)	.(a)
	Mode		18	0	2	0	0
	Minimum		18	0	2	0	0
	Maximum		18	0	2	0	0
14	N	Valid	12	12	12	12	12
		Missing	1	1	1	1	1
	Mean		41.58	.00	.00	18.83	.00
	Median		43.50(a)	.(a)	.(a)	20.00(a)	.(a)
	Mode		50	0	0	20(b)	0
	Minimum		21	0	0	5	0
	Maximum		60	0	0	35	0

Program areas(s) as described if consistent with student enrollment			Students in radiography	Students in radiation therapy	Students in nuclear medicine	Students in sonography	Students in another discipline
	Std. Deviation		12.243	.000	.000	9.054	.000
15	N	Valid	3	3	3	3	3
		Missing	1	1	1	1	1
	Mean		30.00	.00	.00	.00	13.33
	Median		32.00(a)	.(a)	.(a)	.(a)	13.33(a)
	Mode		8(b)	0	0	0	15
	Minimum		8	0	0	0	10
	Maximum		50	0	0	0	15
	Std. Deviation		21.071	.000	.000	.000	2.887
34	N	Valid	0	0	0	0	0
		Missing	1	1	1	1	1
123	N	Valid	2	2	2	2	2
		Missing	0	0	0	0	0
	Mean		18.00	8.00	9.00	.00	.00
	Median		18.00(a)	.(a)	9.00(a)	.(a)	.(a)
	Mode		16(b)	8	8(b)	0	0
	Minimum		16	8	8	0	0
	Maximum		20	8	10	0	0
	Std. Deviation		2.828	.000	1.414	.000	.000
134	N	Valid	3	4	4	4	4
		Missing	2	1	1	1	1
	Mean		32.33	.00	14.00	14.25	1.25
	Median		25.00(a)	.(a)	8.50(a)	13.50(a)	1.25(a)
	Mode		12(b)	0	7(b)	5(b)	0
	Minimum		12	0	7	5	0
	Maximum		60	0	32	25	5
	Std. Deviation		24.826	.000	12.028	8.302	2.500
145	N	Valid	4	4	4	4	4
		Missing	1	1	1	1	1
	Mean		46.50	.00	.00	12.50	13.50
	Median		45.00(a)	.(a)	.(a)	11.00(a)	11.00(a)
	Mode		21(b)	0	0	8(b)	8(b)
	Minimum		21	0	0	8	8
	Maximum		75	0	0	20	24
	Std. Deviation		22.487	.000	.000	5.260	7.188
345	N	Valid	2	2	2	2	2
		Missing	0	0	0	0	0
	Mean		.00	.00	16.00	11.00	8.50
	Median		.(a)	.(a)	16.00(a)	.(a)	8.50(a)
	Mode		0	0	15(b)	11	7(b)
	Minimum		0	0	15	11	7
	Maximum		0	0	17	11	10
	Std. Deviation		.000	.000	1.414	.000	2.121
1234	N	Valid	3	3	3	3	3
		Missing	1	1	1	1	1

Program areas(s) as described if consistent with student enrollment			Students in radiography	Students in radiation therapy	Students in nuclear medicine	Students in sonography	Students in another discipline
	Mean		31.33	10.00	18.33	19.33	.00
	Median		30.00(a)	10.00(a)	20.00(a)	18.00(a)	.(a)
	Mode		20(b)	0(b)	10(b)	10(b)	0
	Minimum		20	0	10	10	0
	Maximum		44	20	25	30	0
	Std. Deviation		12.055	10.000	7.638	10.066	.000
1245	N	Valid	1	1	1	1	1
		Missing	0	0	0	0	0
	Mean		35.00	20.00	.00	15.00	15.00
	Median		.(a)	.(a)	.(a)	.(a)	.(a)
	Mode		35	20	0	15	15
	Minimum		35	20	0	15	15
	Maximum		35	20	0	15	15
1345	N	Valid	1	1	1	1	1
		Missing	0	0	0	0	0
	Mean		8.00	.00	2.00	24.00	3.00
	Median		.(a)	.(a)	.(a)	.(a)	.(a)
	Mode		8	0	2	24	3
	Minimum		8	0	2	24	3
	Maximum		8	0	2	24	3
12345	N	Valid	2	2	2	2	2
		Missing	0	0	0	0	0
	Mean		55.00	19.00	16.00	30.00	25.00
	Median		55.00(a)	19.00(a)	16.00(a)	30.00(a)	25.00(a)
	Mode		50(b)	18(b)	12(b)	20(b)	20(b)
	Minimum		50	18	12	20	20
	Maximum		60	20	20	40	30
	Std. Deviation		7.071	1.414	5.657	14.142	7.071

Note: Thirty-nine cases were not included in the above table due to the following inconsistencies: a program type indicated as being offered but with no student enrollment identified, or student enrollment data given for a program that was not indicated as being offered.

The reported average age of students enrolled in radiologic science and radiation therapy programs is 26. When asked to comment on trends seen in the student population over the past three years, 26% of PDs report a general increase in age of program applicants, a 33% increase in program applicants possessing a college degree, and a 37% increase in program applicants that are considered "career change" applicants.

What is the average age of the students in your program?

N	Valid	307
	Missing	414
Mean		26.0879
Median		25.5733
Mode		25.00
Std. Deviation		3.76023
Minimum		18.00
Maximum		50.00

Over the past three years what trends have you seen for the following:

Average age of your applicant pool?

	Frequency	Percent	Valid Percent
Decreased	18	2.5	5.7
Remained the same	111	15.4	35.0
Increased	188	26.1	59.3
Total valid	317	44.0	100.0
Blank	404	56.0	
Total	721	100.0	

Number of program applicants with a college degree?

	Frequency	Percent	Valid Percent
Decreased	7	1.0	2.2
Remained the same	73	10.1	22.9
Increased	239	33.1	74.9
Total Valid	319	44.2	100.0
Blank	402	55.8	
Total	721	100.0	

Number of "Career change" individual applying for your program?

	Frequency	Percent	Valid Percent
Decreased	3	.4	.9
Remained the same	50	6.9	15.6
Increased	267	37.0	83.4
Total valid	320	44.4	100.0
Blank	401	55.6	
Total	721	100.0	

Salaries:

Survey participants were asked to identify their current salary range. The majority of PDs indicated a salary that fell in the range of $56 – 65,000. Full-time faculty mostly fell in the range of $46 – 55,000, while part-time/adjunct faculty fell in the $45,000 or less range. Single mean values were calculated for each group and then compared to salary figures from the ASRTs Wage and Salary Survey 2004.

A PD mean salary of $58,988 falls at the 38th percentile within the distribution of all salaried R.T.s as reported in the 2004 Wage and Salary Survey. Mean salary figure for full-time faculty of $48,833 equates to the 19th percentile of salaries, while the part-time/adjunct faculty mean of $38,240 represents about the 8th percentile for all salaried R.T.s. The figure for part-time and adjunct faculty shifts to about the 29th percentile when compare to wage and salary survey data for part-time R.T.s.

Where Faculty Salaries Fit in Overall Distribution of Salaries of Full-time Salaried R.T.s
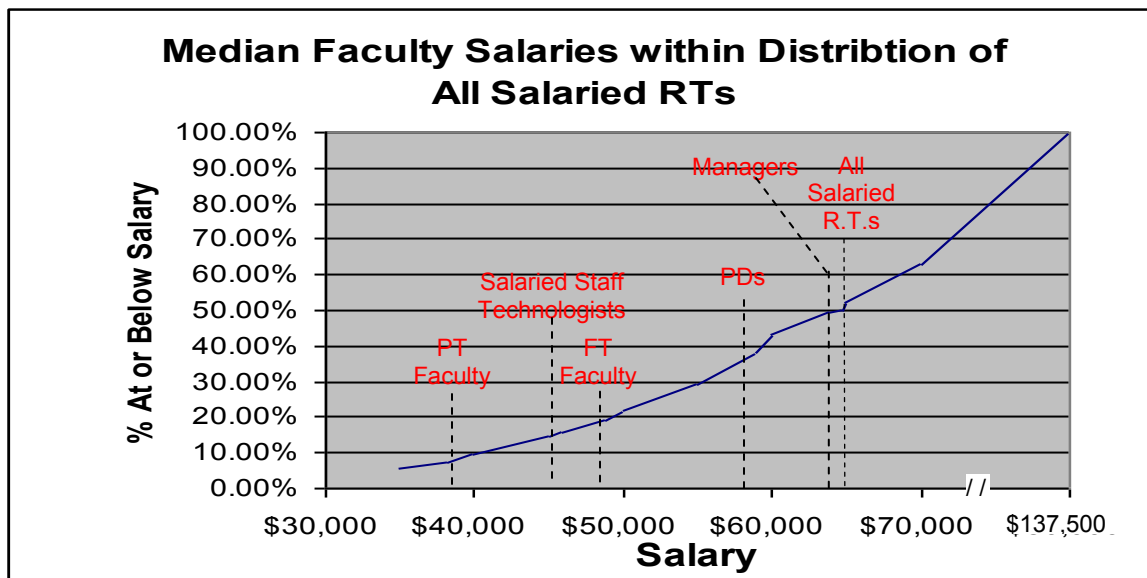
Group	Median Salary	Percentile within FT Salaried R.T. Distribution
Part-time Faculty	$38,240	7.5th (7.9th of all R.T.s, 28.7th of part-time R.T.s)
Staff technologists	$45,978	16.0th
FT Faculty	$48,833	19.1th
PDs	$58,988	38.3th
Supervisors/ Managers	$63,928	49.7th
All salaried R.T.s	$64,811	50.0th

Within what range does your current salary fall?

	PDs			Full-Time Faculty		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
$45,000 or less	32	10.1	10.1	116	36,8	36.8
$46,000 – 55,000	91	28.5	38.7	125	39.7	76.5
$56,000 – 65,000	103	32.4	71.1	48	15.2	81.3
$66,000 – 75,000	59	18.6	89.6	15	4.8	86.0
$76,000 or more	33	10.4	100.0	11	3.5	100.0
Total valid	318	100.0		315	100.0	

Median salary approximately $58,988 for PDs, $48,833 for full-time faculty members other than PDs.
Note these medians lie at the 38th and 19th percentiles, respectively, of annual salaries for all ARRT-registered R.T.s as estimated in ASRT's *Wage and Salary Survey 2004.*

Part-time and Adjunct Faculty

Within what range does your current salary fall?

	Frequency	Percent	Valid Percent	Cumulative Percent
$45,000 or less	120	55.6	66.3	66.3
$46,000 – 55,000	21	9.7	11.6	77.9
$56,000 – 65,000	16	7.5	8.8	86.7
$66,000 – 75,000	9	4.2	5.0	91.7
$76,000 or more	15	6.9	8.3	100.0
Total valid	181	83.8	100.0	
Missing	35	16.2		
Total	216	100.0		

Note: Median salary for all ARRT-registered R.T.s as of first quarter 2004 was $55,007. The 25th percentile of 2004 R.T. salaries was $44,046.

Part-time and adjunct faculty were asked to identify how much of their salary is paid by a hospital, clinic or physician/physician practice. Twenty-six percent (26%) indicated that all of their salary was paid by a hospital or clinic while less than 1% (0.5%) indicated their salary was paid by a physician or physician group.

About what percent of your FTE as an educator is paid for by a hospital or clinic? ……. is paid for by a physician or physician practice?

Percent of FTE as educator paid by physician or physician practice

Statistics

		% FTE as educator paid by hospital or clinic	% FTE as educator paid by physician or physician practice
N	Valid	185	187
	Missing	31	29
Mean		33.9405	.5936
Median		.6549(a)	.0811(a)
Mode		.00	.00
Std. Deviation		46.32226	7.33056
Minimum		.00	.00
Maximum		100.00	100.00
Percent > zero		40.0%	1.6%
Percent > half		33.4%	0.5%
Percent all		26.9%	0.5%

a Calculated from grouped data.

Participants were asked to compare their salary to that of recent program graduates in their first job. Not surprisingly the majority of PDs, full-time and part-time faculty indicated their salaries were higher than recent graduates (75% of PDs, 52% of FT faculty, 61% of PT/adjunct faculty). One item that stands out from the reported data is that 20% of the part-time and adjunct faculty indicate their salary, when compared to program graduates, would be lower on average by approximately $9,500.

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PDs and full-time faculty:

How does your salary compare to the average salary received by recent graduates of your program in their first job?

	PDs			Full-time Faculty		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
Lower	41	11.8	11.8	41	16.4	16.4
About the same	44	12.6	24.4	79	31.6	48.0
Higher	263	75.6	100.0	130	52.0	100.0
Total valid	348	100.0		250	100.0	

Part-time and adjunct faculty:

How does your present salary compare to the average salary (or equivalent hourly wage) received by recent graduates of your program in their first job?

	Frequency	Percent	Valid Percent	Cumulative Percent
Lower	29	13.4	20.0	20.0
About the same	27	12.5	18.6	38.6
Higher	89	41.2	61.4	100.0
Total valid	145	67.1	100.0	
Missing	71	32.9		
Total	216	100.0		

Of the 29 who reported lower pay than their graduates, 24 indicated (in varying reporting methods) by:
* 6% to 85% (median of 13 responses = 21%).
* $1.50 to $7.00 per hour (median of 5 responses = $5.00).
* $1,000 to $25,000 per annum (median of 7 responses = $9,500).

When asked to forecast how much higher or lower salaries were compared to recent program graduates, the extremes range from $20,170 higher (PDs) to $9,500 lower (part-time/adjunct faculty) salary figures.

By what amount is your salary higher or lower than recent graduates of your program?

PDs

		Higher by this amount			Lower by this amount		
		Per Hour	Annual Salary	Percent	Per Hour	Annual Salary	Percent
N	Valid	13	122	72	0	9	3
	Missing	708	599	649	721	712	718
Mean		9.20	20170.96	34.88		4000.00	12.67
Median		8.27	19968.00	32.18		3500.00	5.00
Mode		10	20000	50		5000	3
Std. Deviation		3.655	8842.291	15.478		2136.001	15.044
Minimum		5	1000	10		1500	3
Maximum		15	50000	64		8000	30

Full-time Faculty other than PD

		Higher by this amount			Lower by this amount		
		Per Hour	Annual Salary	Percent	Per Hour	Annual Salary	Percent
N	Valid	27	91	14	2	24	13
	Missing	694	630	707	719	697	708
Mean		6.6170	13894.9527	22.1429	5.0000	7229.1667	12.2308
Median		6.5556	12826.6667	21.4286		5571.4286	10.6667
Mode		7.00	20000.00	20.00	5.00	3000.00	10.00
Std. Deviation		2.64007	7904.76595	5.78934	.00000	5567.72369	5.30964
Minimum		1.80	2000.00	15.00	5.00	500.00	2.00
Maximum		13.00	40000.00	30.00	5.00	20000.00	20.00

Part-time and adjunct faculty:
Of the 89 who reported being paid more than their newly-graduated students, 71 indicated (in varying reporting methods) by:
   * 3% to 100% (median of 29 responses = 26.7%).
   * $2 to $25 per hour (median of 26 responses = $4.83 per hour).
   * $1,000 to $40,000 per annum (median of 21 responses = $15,000).

When asked how their salary compares to a salary they believed they could make if 100% of the time worked was in clinical practice, greater than twice as many PDs (47% vs. 20%) indicated a potentially lower salary than higher. Also, more full-time faculty expected to make a lower salary than higher (37% vs. 21%), while part-time/adjunct faculty were almost equally split between those who expected to make a lower salary than a higher one (25% vs. 26%).

	PDs			Full-time Faculty other than PDs		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
Lower	140	47.0	47.0	111	37.2	37.2
About the same	98	32.9	79.9	96	32.2	69.4
Higher	60	20.1	100.0	63	21.1	100.0
Total valid	298	100.0		260	100.0	

How does your salary compare to the salary you believe you could make if you worked 100% of the time in clinical practice?

Part-time and adjunct faculty

How does your present salary compare to the salary you believe you could earn (here or at another facility) if 100% of your FTE were devoted to clinical practice?

	Frequency	Percent	Valid Percent	Cumulative Percent
Lower	32	14.8	25.2	25.2
About the same	62	28.7	48.8	74.0
Higher	33	15.3	26.0	100.0
Total valid	127	58.8	100.0	
Missing	89	41.2		
Total	216	100.0		

Clinical Practice:

When asked to identify how recently educators have practiced in the disciplines they teach, the majority of PDs (50% or more) indicate it has been two years or more since practicing in a given discipline. Approximately half (49.5%) of full-time radiography faculty indicate working the discipline within the past month. One-fourth (25%) of the full-time sonography faculty indicate working within the past year in sonography, while full-time radiation therapy, and nuclear medicine faculty, like PDs, indicate that over one-half (50% or more) have not worked in their particular discipline in two years or more.

Not surprisingly the majority of part-time and adjunct faculty have worked more recently in their given discipline, while higher percentages of radiographers, radiation therapists and sonographers indicated working within their specialty in the previous week. Sixteen of the 28 responses from part-time/adjunct nuclear medicine faculty indicated that they had not practiced in two years or more.

(PD Section). 49 (FT Faculty Section).
How recently have you practiced each of the disciplines you teach in a clinical setting?

PDs:

How recently?	Radiography		Radiation Therapy		Nuclear Medicine		Sonography	
	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent
Valid N	263		47		34		12	
> 5 years ago	116 (44.1%)	44.1	20 (42.5%)	42.5	14 (41.3%)	41.3	5 (41.7%)	41.7
25-60 months	28 (10.6%)	54.7	5 (10.6%)	53.1	7 (20.7%)	62.0	1 (8.3%)	50.0
13-24 months	15 (5.7%)	60.4	4 (8.5%)	61.6	2 (5.9%)	67.9	2 (16.7%)	66.7
Year	27 (10.2%)	70.6	7 (14.9%)	76.5	4 (11.8%)	79.7	2 (16.7%)	83.3
Month	21 (8.0%)	78.7	2 (4.3%)	80.8	1 (2.9%)	82.7	2 (16.7%)	100.0
Week	56 (21.3%)	100.0	9 (19.1%)	100.0	6 (17.1%)	100.0	0 (0.0%)	100.0

Full-time Faculty:

How recently?	Radiography		Radiation Therapy		Nuclear Medicine		Sonography	
	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent	Frequency	Cumulative Percent
Valid N	309		23		22		16	
> 5 years ago	62 (20.1%)	20.1	12 (52.2%)	52.2	9 (40.9%)	40.9	6 (37.5%)	37.5
25-60 months	27 (8.7%)	28.8	2 (8.7%)	60.9	5 (22.7%)	63.6	1 (6.2%)	43.7
13-24 months	16 (5.2%)	34.0	1 (4.3%)	65.2	4 (18.2%)	81.8	2 (12.5%)	56.2
Year	25 (8.1%)	42.1	3 (13.0%)	78.2	1 (4.5%)	86.3	2 (12.5%)	68.7
Month	26 (8.4%)	50.5	0 (0.0%)	78.2	0	86.3	1 (6.2%)	75.0
Week	153 (49.5%)	100.0	5 (21.7%)	100.0	3 (13.6%)	100.0	4 (25.0%)	100.0

Part-time and adjunct faculty:

How recently have you practiced each of the disciplines you teach in a clinical setting?

How long ago practiced this specialty in a clinical setting?	Specialty				
	Radiography	Radiation Therapy	Nuclear Medicine	Sonography	Mammography*
> 5 years ago	22 (13.2%)	11(42.3%)	13(46.4%)	4 (30.8%)	3 (18.8%)
25-60 months	12 (7.2%)	1(3.8%)	3(10.7%)	1 (7.7%)	1 (6.2%)
13-24 months	4 (2.4%)	0 (0.0%)	2(7.1%)	0 (0.0%)	0 (0.0%)
Year	9 (5.4%)	2 (7.6%)	0(0.0%)	0 (0.0%)	2 (12.5%)
Month	9 (5.4%)	1(3.8%)	2(7.1%)	0 (0.0%)	1 (6.2%)
Week	110 (66.3%)	11(42.3%)	8(28.6%)	8 (61.6%)	9 (56.2%)
N	166 (76.9%)	26 (12.0%)	28 (13.0%)	13 (6.0%)	16 (7.4%)

Academic Achievement:

Responses to academic achievement yielded the following results: Greater than one-half (53.8%) of PDs indicate having achieved a master's degree. About 35% have bachelor's degrees, while slightly less than 6%) report having obtained a doctoral degree.

Most full-time faculty (42.6%) have a bachelor's degree, 25.8% have master's degrees, 15.8% have associate degrees, slightly less than 10% have a high school diploma plus a certificate, and approximately 4% have obtained a doctoral degree.

One-third (33.8%) of part-time and adjunct faculty have associate degrees, slightly more than one-fourth (26.4%) have bachelor's degrees, more than 13% have a high school diploma plus certificates and 4.1% report having a doctoral degree.

What is the highest level of education you have attained?

	PDs			Full-time Faculty		
	Frequency	Valid Percent	Cumulative Percent	Frequency	Valid Percent	Cumulative Percent
Valid N	320			329		
High school + certificate	2	0.6	.6	30	9.1	9.1
Associate degree	9	2.8	3.4	52	15.8	24.9
Bachelor's degree	114	35.6	39.0	140	42.6	67.5
Master's Degree	172	53.8	92.8	85	25.8	93.3
Doctoral (including medical degree)	19	5.9	98.7	14	4.3	97.6
Advanced certificate	0	0.0	0.0	4	1.2	98.8
Other	4	1.3	100.0	4	1.2	100.0

PT and Adjunct Faculty:

	Frequency	Percent	Valid Percent	Cumulative Percent
High school + certificate	30	13.8	15.3	15.3
Associate degree	73	33.8	37.2	52.5
Bachelors	57	26.4	29.1	81.6
Masters degree	19	8.8	9.7	91.3
Doctoral degree	8	3.8	4.1	95.4
Advanced certificate	8	3.7	4.1	99.5
High school + certificate, advanced certificate	1	.5	0.5	100.0
Total valid	196	90.7	100.0	
Missing	20	9.3		
Total	216	100.0		

When asked if they are pursuing an advanced degree in or closely related to the radiologic sciences, a minority of all groups indicated "yes" (PDs = 22.9%, FT faculty = 30.6%, PT/Adjunct faculty = 22.7%).

If pursuing an advanced degree, participants were asked to identify if courses are being taken primarily through distance learning, on-campus and distance learning, or primarily on-campus. About two-thirds (64.4%) of part-time/adjunct faculty are taking courses primarily via distance learning. Not quite one-half of PDs and full-time faculty (PD's = 48.7%, FT faculty = 46.7%) are primarily using distance learning, while nearly one-third of PDs and full-time faculty (PD's = 30.3%, FT faculty = 30.4%) take courses primarily on-campus.

Are you pursuing an advanced degree in or closely related to the radiologic sciences?

	PDs			Full-time Faculty		
	Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
No	232	32.2	77.1	209	29.0	69.4
Yes	69	9.6	22.9	92	12.8	30.6
Total valid	301	41.7	100.0	301	41.7	100.0
Blank	420	58.3		420	58.3	
Total	721	100.0		721	100.0	

If "Yes," is this primarily an on-campus or a distance-learning program?

	PDs			Full-time Faculty		
	Frequency	Percent	Valid Percent	Frequency	Percent	Valid Percent
Primarily via distance learning	37	5.1	48.7	43	6.0	46.7
Nearly equal numbers of credit hours on-campus and via distance learning	6	0.8	7.9	11	1.5	12.0
Primarily on-campus	23	3.2	30.3	28	3.9	30.4
Other	10	1.4	13.2	10	1.4	10.9
Total valid	76	10.5	100.0	92	12.8	100.0
Blank	645	89.5		629	87.2	
Total	721	100.0		721	100.0	

Part-time and Adjunct Faculty

Are you pursuing an advanced degree in or closely related to the radiologic sciences?

	Frequency	Percent	Valid Percent
N	143	66.2	77.3
Y	42	19.4	22.7
Total valid	185	85.6	100.0
Missing	31	14.4	
Total	216	100.0	

29yes. If yes, is this primarily an on-campus or distance-learning program?

	Frequency	Percent	Valid Percent
Primarily via distance learning	29	13.4	64.4
Nearly equal numbers of credit hours on-campus and via distance learning	4	1.9	8.9
Primarily on-campus	9	4.2	20.0
Other	3	1.4	
Total responses	45	20.8	100.0
Blank	171	79.2	
Total	216	100.0	100.0

PT/Adjunct Faculty Only Data:

This next section of the summary reflects data from questions that were unique to the survey instrument applied to part-time and adjunct faculty. The questions sample the percentage of workload assigned to the role of part-time educator, the distribution of hours per week allocated to clinical supervision vs. clinical instruction, and the amount of weight the role as a clinical educator carries in one's annual evaluation.

The majority (54.0%) indicate that their clinical educator role makes up less than one-half their FTE. A median FTE value of 38% was calculated from the group data received.

The distribution of FTE spent on clinical instruction vs. clinical supervision for part-time and adjunct faculty yielded a slightly greater weighting toward clinical instruction (median = 45.7%) than clinical supervision (median = 26.3%).

When asked to rate the weight the role as a clinical educator carries in an annual evaluation, surprisingly 41% of the respondents indicated their clinical faculty role had "None" (23.6%) or "Very Little" (17.4%) weight. Only 12.4% indicated their clinical educator role carried "More" weight than their technologists role. Sixty individuals indicated that 100% of their annual evaluation was based upon their role as a part-time clinical educator; this represented 33.7% of the responses received.

About what percentage of your FTE is assigned to your role as a part-time didactic/clinical educator?

		% of FTE devoted to role as PT educator
N	Valid	176
	Missing	40
Mean		47.2301
Median		38.6667
Mode		100.00
Std. Deviation		37.82939
Minimum		.00
Maximum		100.00
Percent < half of FTE		54.0%
Percent > half of FTE		36.4%

About what percentage of your weekly student contact hours are devoted to clinical instruction? …. devoted to clinical supervision?

Statistics			
		Percent of student contact devoted to clinical instruction	Percent of student contact devoted to clinical supervision
N	Valid	191	190
	Missing	25	26
Mean		47.3455	39.8421
Median		45.7692	26.2500
Mode		100.00	.00
Std. Deviation		36.15793	37.94965
Minimum		.00	.00
Maximum		100.00	100.00
Percent devoting < half to this element		49.2%	57.9%
Percent devoting > half to this element		37.7%	31.1%

How much weight does your role as a clinical educator carry in your annual evaluation?

	Frequency	Percent	Valid Percent	Cumulative Percent
None	42	19.4	23.6	23.6
Very little (but not zero)	31	14.4	17.4	41.0
Less than my technologist role(s)	23	10.6	12.9	53.9
More than my technologist role(s)	22	10.2	12.4	66.3
100%	60	27.8	33.7	100.0
Total valid	178	82.4	100.0	
Missing	38	17.6		
Total	216	100.0		

Summary and Conclusion:

A total of 326 programs are represented in the data collected. Single program sponsors make up the greatest percentage of overall program types (271of 326 = 83%: 210 Radiography, 35 Radiation Therapy, 22 Nuclear Medicine, 4 Sonography). The balance of programs represented in the survey were multimodality programs (55 0f 326 = 17%).

Half of all programs in this survey are structured as associate degree programs (161 of 321) The next most frequently reported program type is the two-year certificate program (85of 321) with 16 certificate programs indicating some form of linkage to a college. Forty-nine bachelor's degree programs are included in the survey data.

Based upon the average number of faculty members (full and part-time) reported per program (radiography 3 FT, 3 PT, radiation therapy 2 FT, 7 PT, nuclear medicine 2 FT, 5 PT, sonography 2 FT, 2 PT) there are over 1585 (742 FT, 843 PT) faculty positions associated with the programs represented in this survey. Barring program growth or creation of new programs, based on the forecast of retirement/career change for both full and part-time faculty there will be a turnover of faculty of between 700 and 800 positions over the next five to 10 years. Part-time/adjunct faculty vacancies are expected to create the greatest number of opportunities for technologists to transition to education, with approximately one-third of current part-time/adjunct faculty planning on leaving this role within five years.

Program applicant trends indicate a transition away from the traditional high school applicant to adult students in their mid-twenties, with prior post secondary education experience, seeking a career change. This data emphasizes the need for faculty, both full-time and part-time, to have an understanding of the characteristics and needs of the adult learner. Adult learners bring to the environment a wealth of education, experience and life skills that create both opportunities and challenges in the classroom and clinical setting.

Reported salaries of PDs place them in the 38th percentile (PD's = $58,988, all salaried R.T.'s = $64,811) when placed on the salary distribution for all salaried technologists, according to the ASRT Wage and Salary Survey 2004. Full-time faculty salaries fall at the 19th percentile (FT = $48,833) and part-time/adjunct faculty salaries, when compare to all salaried R.T.s, are found slightly over the 7th percentile (PT = $38,240). When a comparison is made between part-time/adjunct faculty salaries and reported salaries for part-time R.T.s, part-time/adjunct faculty fare a bit better, falling at the 28th percentile of part-time salaries.

All categories of respondents (PDs, full and part-time/adjunct faculty) indicated that their current salary is greater than that of program graduates in their first job. Of interest here is that one in five (20%) of part-time/adjunct faculty indicated the opposite, that program graduates would earn more in their first job than faculty were earning.

When asked about salary earnings if working 100% of the time in clinical practice, the majority of all groups indicated their salary would be about the same or would decrease. Only 20% of PDs and 21% of full-time faculty indicated their salary would be higher in clinical practice. Twenty-six percent of part-time/adjunct faculty indicated the potential for earning more in clinical practice.

Considering the gap between when one is involved in clinical practice in a given discipline and one's educator role, most part-time/adjunct faculty indicate the most current clinical practice, within the past week to month. PDs exhibit the greatest separation from clinical practice, with over one-half indicating a gap of two years or more from practicing in the clinical environment.

In terms of academic achievement, a majority of PDs (191 of 316) report having obtained a master's (172) or doctoral degree (19). The majority of full-time faculty (239) have earned a bachelor's or higher degree (BS = 140, MS = 85, Doctoral = 14). The majority of part-time/adjunct faculty possess an associate degree (73 of 187). Part-time/adjunct faculty with bachelor's, master's or doctoral degrees make up 45% of the population (BS = 57, MS = 19, Doctoral = 8).

While academic achievement is common among the educator populations sampled, a very low percentage of these same educators are seeking an advanced academic degree. Less than one-third of those surveyed identified they were pursuing an advanced degree (PD's = 22%, FT = 30%, PT = 22%). Participants were not asked to provide a cause/reason or rationale for not advancing their academic achievement. This is an item for consideration on future faculty needs assessments.

Part-time/adjunct faculty report a greater weighting of their educator time spent involved in clinical instruction (45%) than in clinical supervision (26%). When asked to comment on the weighting their clinical educator role plays in their annual evaluation, a surprising 41% indicated that it had "none" (24%) or "very little" (17%) weight.

This concludes the second of the three summaries of data collected from the 2004 Faculty Development Needs Assessment. The final summary will focus on personal development activities, along with needs, wants and desires expressed by educators with the goal of enhancing student learning experiences and for personal career development.

Faculty Development Needs Assessment
Summary of Data: Part 3

In spring 2004 the ASRT Education Department surveyed the community of radiologic sciences educators in an attempt to identify strategies for improving ASRT resources and services to educators and students. With the assistance of Dr. Richard Harris, Ph.D., ASRT director of research, two "Faculty Needs Assessment" instruments were constructed. One survey instrument was targeted to educational program directors (PDs) and full-time faculty, while the other instrument was constructed with part-time and adjunct faculty in mind. A total of 721 full-time and 216 part-time surveys were returned for tabulation.

This is the third of three summaries of survey results. The first summary focused on demographics of the educator population: gender, age, marital status, ethnicity, years of experience and projections of years until retirement. The second report addressed recognition of program types, numbers of full-time and part-time/adjunct faculty, trends associated with program applicants, salaries, academic achievement and weighting of part-time/adjunct role in annual evaluations. This report addresses personal development activities, as well as needs, wants and desires expressed by educators to enhance student learning experiences and personal career development.

Document Links:
- Role Comfort Rating
- Role Ratings of 1or 2
- Priorities for Personal Development
- Focus of Personal Development
- Educator "Wish List" Items
- Distance Learning
- Program Admissions
- Interim Program Assessment
- Remediation and Counseling
- Measures of Academic Effectiveness
- Qualitative Assessments
- Outcomes Assessment
- Keeping Up With Innovators
- Instructional Resources
- Research
- Summary and Conclusion

Role Comfort

The initial question of the faculty needs assessment instrument asked educators to rate their degree of comfort in select aspects of their role as a facilitator of student learning. Using the provided five-point scale ranging from (1) Very Uncomfortable to (5) Very Comfortable, program directors (PDs), full and part-time/adjunct faculty are generally comfortable in the various roles they play. Below is a summary table of this data:

How comfortable do you feel with each of the following aspects of your role as a facilitator of student learning?

(1 = Very uncomfortable; 5 = Very comfortable)

	Mean Value for PDs and Full-time Faculty	Mean Value for Part-time and Adjunct Faculty
Ability to keep up with technological developments	3.8	4.0
Personal experience with the procedures and technologies (e.g., PACS, computed radiography (CR)/digital radiography (DR)) upon which you are basing theories and applications for student learning	3.2	3.8
Knowledge and command of teaching techniques	4.2	4.0
Ability to use current multimedia techniques (e.g., Web-based supplementary and review materials; audio and video clips in PowerPoint presentations) effectively	3.7	3.4
Ability to tailor curriculum, materials and mode of presentation to the needs of all students taking a given course in a given semester	4.0	3.9
Ability to tailor curriculum, materials and mode of presentation to the needs of individual students within a class	4.0	3.9
Other	3.4	3.7

PDs/Full-Time Faculty:
How comfortable do you feel with each of the following aspects of your role as a facilitator of student learning?

(1 = Very uncomfortable; 5 = Very comfortable)

	Ability to keep up with technological developments	Personal experience with the procedures and technologies…	Knowledge and command of teaching techniques	Ability to use current multimedia techniques	Ability to tailor curriculum etc. to needs of students in given course	Ability to tailor curriculum etc. to needs of individuals within a class	Other (please specify)
N Valid	663	663	661	663	663	663	16
Blank	58	58	60	58	58	58	705
Mean	3.7873	3.1689	4.2330	3.7421	4.0664	4.0045	3.4375
Median	3.8229	3.1811	4.3174	3.8624	4.1553	4.0963	3.4000
Mode	4.00	3.00	4.00	5.00	4.00	4.00	5.00
Std. Deviation	.89562	1.09867	.79974	1.13240	.86129	.87340	1.41274
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00
% 4 or 5	65.6	39.2	85.3	60.6	77.7	76.8	43.7
% 1 or 2	8.1	28.5	3.0	14.3	4.7	6.2	31.3

PT/Adjunct Faculty:
How comfortable do you feel with each of the following aspects of your role as a facilitator of student learning?

(1 = Very uncomfortable; 5 = Very comfortable)

	Ability to keep up with technological developments	Personal experience with the procedures and technologies…	Knowledge and command of teaching techniques	Ability to use current multimedia techniques	Ability to tailor curriculum etc. to needs of students in given course	Ability to tailor curriculum etc. to needs of individuals within a class	Other (please specify)
N Valid	206	204	206	198	200	199	6
Missing	10	12	10	18	16	17	210
Mean	4.0971	3.7598	4.0874	3.3788	3.8600	3.9146	3.6667
Median	4.0000	4.0000	4.0000	3.0000	4.0000	4.0000	4.0000
Mode	4.00	5.00	4.00	3.00	4.00	4.00	4.00
Std. Deviation	.90543	1.10803	.77279	1.10970	.89128	.86908	1.03280
Minimum	1.00	1.00	2.00	1.00	1.00	2.00	2.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00
% 4 or 5	77.7%	61.8%	82.0%	44.4%	68.5%	71.9%	66.7%
% 1 or 2	4.9%	15.2%	3.9%	19.7%	6.5%	7.0%	16.7%

Role Ratings of 1or 2

Participants were asked to identify contributors to their lack of comfort with items given a rating of "1" or "2." PDs, full and part-time/adjunct faculty indicated the rapid pace of technological

developments, rapid pace of educational technology and not having practiced in the specialties one teaches for a long time contributed to feelings of "Uncomfortable" to "Very Uncomfortable."

PDs/Full-Time Faculty:
Consider the aspects of your role to which you gave a comfort rating of "1" or "2." What do you believe contributes to your lack of comfort with these aspects? Check all that apply.

Factors Contributing to Lack of Comfort	N	Proportion
Overly restrictive administrative specifications as to curriculum, materials, mode of presentation	721	.0430
Rapid pace of technological developments in specialties you teach	721	.2857
Rapid pace of developments in educational technology (e.g., Web applications, audio and video clips in presentations)	721	.2011
Not having practiced in specialties you teach for very long	721	.1456
Lack of administrative support for professional development in your specialty(ies)	721	.0777
Lack of administrative support for professional development in educational technology	721	.0874
Extreme variability in backgrounds and capabilities of students	721	.1165
Extreme variability in students' preferences for particular media and styles of learning	721	.0846
Other factor(s) contributing to lack of comfort	721	.1442

PT/Adjunct Faculty:
Consider the aspects of your role to which you gave a comfort rating of "1" or "2." What do you believe contributes to your lack of comfort with these aspects? Check all that apply.

Factor Contributing to Lack of Comfort	N	Proportion
Overly restrictive administrative specifications as to curriculum, materials, mode of presentation	216	.0463
Rapid pace of technological developments in specialties you teach	216	.1435
Rapid pace of developments in educational technology (e.g., Web applications, audio and video clips in presentations)	216	.1944
Not having practiced in specialties you teach for very long	216	.1157
Lack of administrative support for professional development in your specialty(ies)	216	.0324
Lack of administrative support for professional dev in educ'l technol	216	.0463
Extreme variability in backgrounds and capabilities of students	216	.0926
Extreme variability in student preferences for particular media, styles of learning	216	.0833
Other factors contributing to lack of comfort	216	.0926
Valid N (listwise)	216	

Priorities for Personal Development
The item selected as the number one "Priority for personal improvement as an educator in the coming year" was the same for PDs, full and part-time/adjunct faculty: to work on an "Improvement in the knowledge of and experience with technological developments in the specialties they teach" (35% PDs/FT, 40% PT/Adjunct). "Improving familiarity with and skill in using instructional technology" (18.6% PDs/FT, 22.4% PT/Adjunct) was the next most frequent choice, followed by "Obtaining or making progress toward achieving a higher academic degree" (19.3% PDs/FT, 11.0% PT/Adjunct).

PDs/Full-Time Faculty:

What is your #1 priority for personal improvement as an educator this year?

	Frequency	Percent
Obtaining or making progress toward achieving a higher academic degree	139	19.3
Refreshing my experience with the procedures I teach	34	4.7
Improving my familiarity with, skill in using educational technology	134	18.6
Improving my knowledge of, experience with technological developments in the specialty(ies) I teach	253	35.1
Networking with other educators	36	5.0
Other	33	4.6
Multiple responses	26	3.6
Total valid	655	90.8
Blank	66	9.2
Total	721	100.0

Note: Among the 26 respondents who checked multiple #1 priorities there were 26 mentions of improving knowledge, 14 of improving familiarity, 8 of a higher academic degree, 8 of refreshing experience, and 9 of networking.

PT/Adjunct Faculty:

What is your number one priority for personal improvement as an educator this year?

Priority	Frequency	Percent	Valid Percent
Improving my knowledge of, experience with technological developments in the specialty(ies) I teach	81	37.5	40.3
Improving my familiarity with, skill in using educational technology	45	20.8	22.4
Obtaining or making progress toward achieving a higher academic degree	22	10.2	11.0
Refreshing my experience with the procedures I teach	25	11.6	12.5
Networking with other educators	10	4.6	5.0
Other	8	3.7	4.0
Multiple responses*	10	4.6	5.0
Total Valid	201	82.9	100.0
Missing	15	17.1	
Total	216	100.0	

*One educator checked "higher degree," "refreshing experience," and "networking;" the other checked "improving knowledge of and experience with technological developments," "improving familiarity with educational technology," and "refreshing experience."

Focus of Personal Development

When asked to elaborate on the particular personal development items on which they would focus, respondents mentioned items within each area that are worth noting. Comments to "Improving knowledge of and experience with technological developments" mostly centered on developing an understanding of, along with materials for instruction on, PACS, operation of CR/DR systems, as well as PET/CT technologies and procedures.

Under "Improving familiarity with and skill in using educational technology," themes that appear consistently across groups are: increasing skills in the use of PowerPoint, enhancing PowerPoint presentations (incorporating images into presentations) and developing experience with Web-based learning management systems such as WebCT or Blackboard.

Under "Obtaining or making progress toward a higher academic degree," most comments referred to being currently enrolled in a degree program.

Under "Refreshing my knowledge with the procedures I teach," most educators recognize the need for personal renewal through self-study, attending conferences and spending time in the practice setting.

Educator "Wish List" Items
Participants were asked to make a "wish list" of up to five items that would assist them in their faculty role. Given this opportunity PDs and full-time faculty submitted 1,507 wish list items. The items listed fell into five discreet categories: "Environmental Resources," "Instructional Technologies," "Simulation Resources and Props," "Funds, Time and Support," and "Books, Films and References."
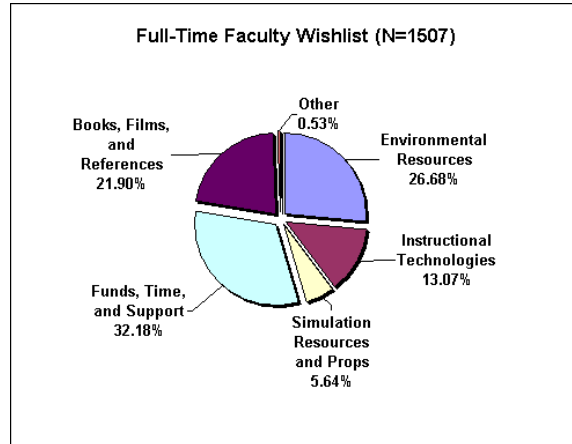
The percentage of the total program director and full-time faculty items that fell in the "Environmental Resources" category is 26.68%. Environmental resources included items such as: energized lab equipment, digital lab equipment, x-ray equipment, CR devices/resources, etc. "Instructional Technologies" – 13.07% of items listed included: laptops, PowerPoint, digital capabilities, computer equipment, scanners.
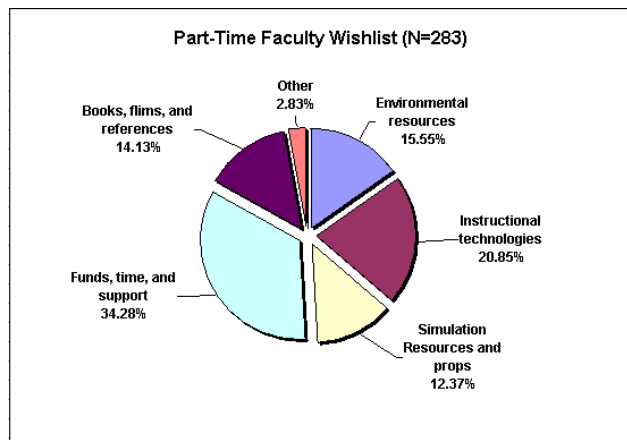"Simulation Resources and Props" – 5.64% of items listed included: phantoms, mannequins and other like items.
"Funds, Time and Support" – 32.18% of items listed included: time, money/funds and additional faculty/coordinators.
"Books, Films and References" – 21.9% of items listed include: web resources for positioning and critical thinking, books with test banks, texts covering new technology, videos, film files and many more items. *Please note: "Books, Films and References" data lacked specificity to create further subcategories for creating a meaningful chart.*

Full-Time Simulation Resources and Props (N=85)

Other 31.77%
Phantoms 52.94%
Mannequins 15.29%

Full-Time Funds, Time, and Support (N=485)

Other 31.52%
Time 34.85%
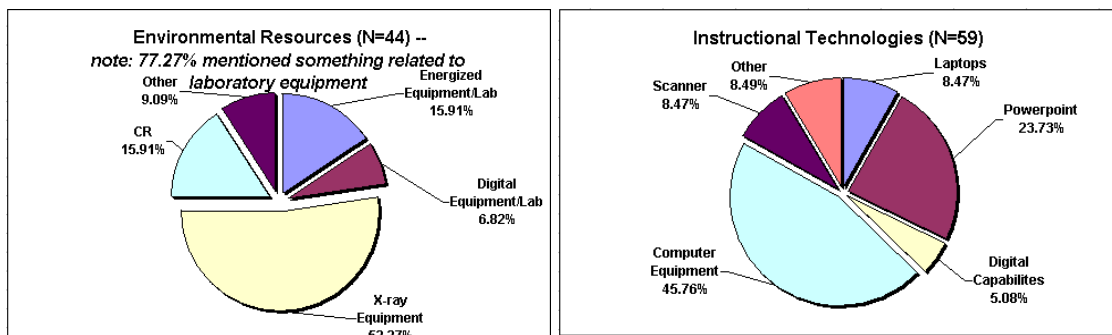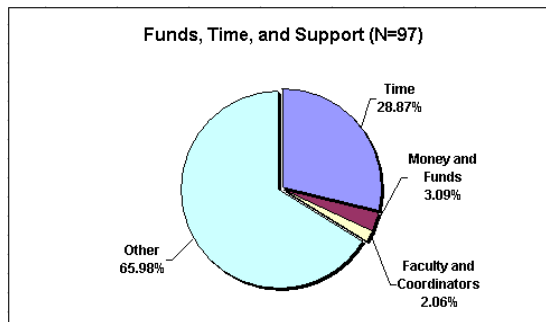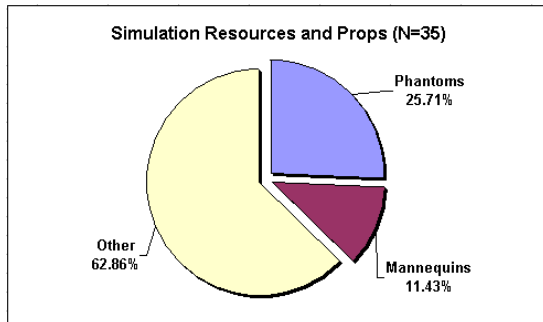Faculty and Coordinators 20.00%
Money and Funds 13.64%
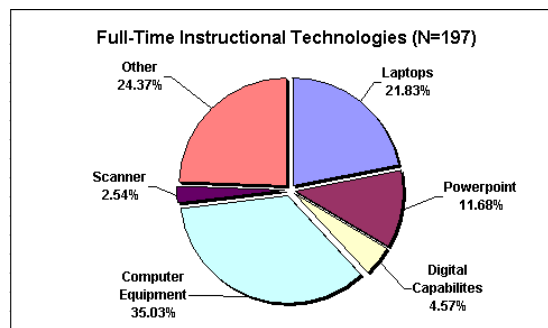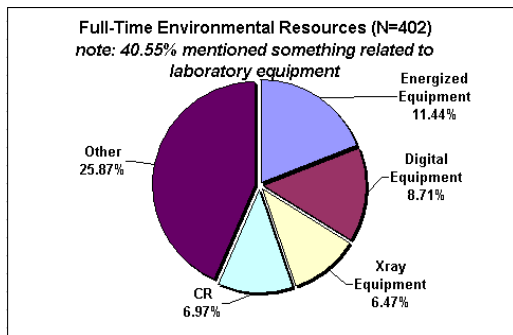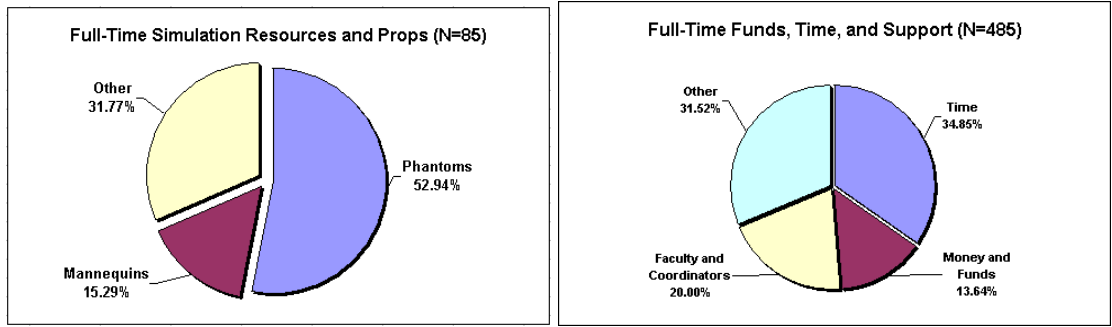
Part-time and adjunct faculty produced a wish list consisting of 283 items. Like PDs and full-time faculty, "Funds, time and support" is the largest category.

Part-Time Faculty Wishlist (N=283)

Other 2.83%
Environmental resources 15.55%
Books, flims, and references 14.13%
Instructional technologies 20.85%
Funds, time, and support 34.28%
Simulation Resources and props 12.37%

Variations between the weighting of items between part-time/adjunct faculty and PDs/full-time faculty include: a greater emphasis on imaging equipment (up-to-date radiographic equipment, gamma camera simulator, CR/DR, energized lab) in "Environmental Resources." Access to computer equipment (laptops, computer workstation, etc.) and presentation software (PowerPoint) stood out in "Instructional Technologies." Film libraries, standardized set of films for critique and greater access to case study files dominated "Simulation Resources and Props." Communicating with other educators, help with teaching techniques and faculty meetings were cited most as "Other" in the category of "Funds, Time and Support."

Environmental Resources (N=44) --
note: 77.27% mentioned something related to laboratory equipment

Other 9.09%
Energized Equipment/Lab 15.91%
CR 15.91%
Digital Equipment/Lab 6.82%
X-ray Equipment 52.27%

Instructional Technologies (N=59)

Scanner 8.47%
Other 8.49%
Laptops 8.47%
Powerpoint 23.73%
Computer Equipment 45.76%
Digital Capabilites 5.08%

Simulation Resources and Props (N=35)

Phantoms
25.71%

Mannequins
11.43%

Other
62.86%

Funds, Time, and Support (N=97)

Time
28.87%

Money and
Funds
3.09%

Faculty and
Coordinators
2.06%

Other
65.98%

Distance Learning

Survey participants were asked to identify if there were any courses in their curriculum that they thought could be provided to students using distance learning and not jeopardize the integrity of the program. In the tallies for both PDs/full-time faculty and part-time adjunct faculty, Medical Terminology yielded the strongest response (count = 154 PDs/FT, 23 = PT/Adjunct), followed by Radiation Protection and/or Radiobiology (count = 95 PDs/FT, 13 = PT/Adjunct), and Pathology and/or Pathophysiology (count = 87 PDs/FT, 12 =PT/Adjunct). Additional courses indicated by PDs and full-time faculty as candidates for distance delivery were: Introduction to Radiologic Technology (count = 80), Physics (count = 70), Ethics and/or Law (count = 56), Anatomy and Physiology (count = 55) and Patient Care/Health care (count = 47). Part-time/adjunct faculty indicated support for Patient Care/Health care (count = 11), and Physics (count = 9).

In addition to the list of course choices provided on the survey instrument, participants were given space to indicate "other courses or type of courses" that could be provided to students via distance learning. This option yielded 153 items from PDs and full-time faculty and 21 from part-time/adjunct faculty.

PDs/Full-Time Faculty:

In your opinion, what courses in your curriculum could be provided to students using distance learning without jeopardizing the integrity of your program?

Course(s)	Code	Count	Pct of Responses	Pct of Cases
Anatomy and/or Physiology	1	55	5.1	10.6
Computers	2	19	1.7	3.7
Cross-sectional anatomy	3	26	2.4	5.0
Ethics and/or Law	5	56	5.1	10.8
Gen Ed	6	39	3.6	7.5
Pathology and/or Pathophysiology	7	87	8.0	16.8
Patient care, health care	8	47	4.3	9.1
Pharmacology	9	14	1.3	2.7
Physics	10	70	6.4	13.5
Positioning	11	9	.8	1.7
Procedures	12	12	1.1	2.3
Rad Protection and/or Rad Biology	13	95	8.7	18.4
Registry review	14	24	2.2	4.6
Terminology, Medical Terminology	15	154	14.2	29.8
Intro to discipline or to rad technol	16	80	7.4	15.5
Radiobiology	17	32	2.9	6.2
All but (a short list or a type)	60	32	2.9	6.2
All (incl'ng already teach all via DL)	66	11	1.0	2.1
Comment on merits of DL	77	58	5.3	11.2
A few, several, etc	87	3	.3	.6
Other course or type of course	88	153	14.1	29.6
DK, Unsure	97	4	.4	.8
NA (e.g., bec clinical instructor only)	99	8	.7	1.5
		-------	-----	-----
Total responses		1088	100.0	210.4

204 missing cases; 517 valid cases

PT/Adjunct Faculty:

What courses could be provided using distance learning w/out jeopardizing integrity of prog?

Course(s)	Code	Count	Pct of Responses	Pct of Cases
None	0	32	15.9	24.2
Anatomy and/or Physiology	1	5	2.5	3.8
Computers	2	4	2.0	3.0
Cross-sectional anatomy	3	5	2.5	3.8
Ethics and/or Law	5	4	2.0	3.0
Gen Ed	6	6	3.0	4.5
Pathology and/or Pathophysiology	7	12	6.0	9.1
Patient care, health care	8	11	5.5	8.3
Pharmacology	9	3	1.5	2.3
Physics	10	9	4.5	6.8
Positioning	11	1	.5	.8
Procedures	12	2	1.0	1.5
Rad Protection and/or Rad Biology	13	17	8.5	12.9
Registry review	14	1	.5	.8
Terminology, Medical Terminology	15	23	11.4	17.4
Intro to discipline or to rad technol	16	5	2.5	3.8

Radiobiology	17	4	2.0	3.0
Not Sure	55	2	1.0	1.5
All (incl'ng already teach all via DL)	66	4	2.0	3.0
Comment on merits of DL	77	16	8.0	12.1
Other course or type of course	88	21	10.4	15.9
NA (e.g., bec clinical instructor only)	99	14	7.0	10.6
		-------	-----	-----
Total responses		201	100.0	152.3

84 missing cases; 132 valid cases

Program Admissions

Approximately two-thirds (64%) of the programs indicate they conduct program admissions using a committee consisting of program staff (faculty or administrative staff). The next most frequent indicator of program selection, amounting to 15% of responses, was "Accepting anyone and everyone who fulfills our institution's minimum requirements."

PDs/Full-Time Faculty:

How do you select students for your program?

	Frequency	Percent	Valid Percent
We accept anyone and everyone who applies	4	.6	.9
We accept anyone and everyone who fulfills our institution's … minimum requirements	98	13.6	15.0
The decision is made for us by an institution- or facility-wide administrator or committee	24	3.3	3.6
Admission decisions are made by a committee consisting of program staff (faculty or administrative staff)	419	58.1	64.1
Admission decisions are made by a single individual … on our program staff	18	2.5	2.7
Other (Please specify)	85	11.8	13.0
"Single individual" and "other"	5	.5	.7
Total valid	653	90.6	100.0
Blank	68	9.4	
Total	721	100.0	

Part-time/adjunct faculty were asked to identify their degree of involvement in the program admissions process. Two-thirds of the responses indicate part-time/adjunct faculty do not participate in program admissions. Those who are involved in the selection process indicate a range of participation from providing clinical tours for program candidates, to being an active interviewer of candidates or part of the program selection committee.

PT/Adjunct Faculty:

Are you involved in program admissions process?

	Frequency	Percent	Valid Percent
No	129	59.7	66.5
Yes	65	30.1	33.5
Total valid	194	89.5	100.0
Blank	22	10.5	
Total	216	100.0	

Interim Program Assessment

More than two-thirds of PDs and full-time faculty indicate that interim assessments are performed to sample the broad-based knowledge gained by students in their programs. When asked to identify the courses where the broad based knowledge assessment is done, most indicated clinic or clinical related assessments, followed by final exams and mock registry reviews.

For those that indicated they were currently not performing interim assessments of student broad-based knowledge, close to 90% (89.5%) indicated an interest in this form of student assessment.

Do you perform any interim assessments of broad based knowledge gained by your students?

		Fre-quency	Percent	Valid Percent
	N	135	18.7	21.1
	some	64	8.9	10.0
	Y	442	61.3	68.9
	Total Valid	641	88.9	100.0
	Blank	80	11.1	
	Total	721	100.0	

If not, would you find this of interest?

		Fre-quency	Percent	Valid Percent
	No	16	2.2	10.5
	Yes	136	18.8	89.5
	Total Valid	152	22.1	100.0
	Blank	569	78.9	
	Total	721	100.0	

Remediation and Counseling

Remediation via tutoring, self-help groups and use of supplemental materials, is a consistent strategy used by PDs, full and part-time/adjunct faculty when dealing with students who after admission don't appear to be suited (in terms of ability or interest) for the program (55% PDs/FT). It is interesting to note that with the exception of one "Other approach" ("Refer to vocational counselor") faculty universally indicated that they take on the role of advisor and counselor for these students.

PDs/Full-Time Faculty:
What do you do about students who after admission don't appear to be suited (in terms of ability or interest) for your program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Advise** such students to move to another program for which they are better suited	39	5.4	5.9	5.9
	Let their **low grades** or other forms of evaluation eliminate them from the program	72	10.0	11.0	16.9
	Try to **motivate** such students toward a career in radiologic technology or in the particular specialty you teach	7	1.0	1.1	18.0
	Try to **remediate** academic or clinical deficiencies via individual tutoring, forming self-help groups, directing to supplementary materials	362	50.2	55.1	73.1
	Count on these **students** to notice their poor performance and act accordingly	10	1.4	1.5	74.6
	Other (Please Specify)	28	3.9	4.3	78.8
	advise, low grades	11	1.5	1.7	80.5
	advise, low grades, motivate	1	.1	0.2	80.7
	advise, low grades, motivate, remediate	1	.1	0.2	80.8
	advise, low grades, motivate, remediate, students, Other	4	.6	0.6	81.4
	advise, low grades, remediate	11	1.5	1.7	83.1
	advise, low grades, remediate, students	2	.3	0.3	83.4
	advise, low grades, remediate, students, Other	1	.1	0.2	83.6
	advise, low grades, students	1	.1	0.2	83.7
	advise, low grades, students, Other	2	.3	0.3	84.0
	advise, motivate	1	.1	0.2	84.2
	advise, motivate, remediate	1	.1	0.2	84.3
	advise, Other	1	.1	0.2	84.5
	advise, remediate	15	2.1	2.3	86.8
	advise, students	1	.1	0.2	86.9
	low grades, motivate	1	.1	0.2	87.1
	low grades, Other	6	.8	0.9	88.0
	low grades, remediate	55	7.6	8.4	96.3
	low grades, remediate, Other	1	.1	0.2	96.5
	low grades, remediate, students	4	.6	0.6	97.1
	low grades, students	2	.3	0.3	97.4
	motivate, Other	1	.1	0.2	97.6
	motivate, remediate	7	1.0	1.1	98.6
	remediate, Other	7	1.0	1.1	99.7
	remediate, students	2	.3	0.3	100.0
	Total Valid	657	91.1	100.0	
	Blank	64	8.9	8.9	
	Total	721	100.0	100.0	

PT/Adjunct Faculty:
What do you do about students who after admission don't appear to be suited (in terms of ability or interest) for your program?

	N	Proportion of those listing one or more approaches
Let low grades eliminate them from program	185	.2120
Count on students to notice poor perf and act accordingly	185	.0978
Advise to move to a prog for which better suited	185	.1413
Remediate via tutoring, self-help groups, supplem material	185	.5652
Motivate studs toward career in rad tech or specialty u teach	185	.1250
Use another approach	185	.1141
Valid N (listwise)	185	
No response	31	.1435

Note: 27 respondents listed two approaches; 10 listed three approaches.

Measures of Academic Effectiveness

"Work performance evaluations by former students' supervisors" followed by "Evaluations of you and your program by former students" were the most frequently mentioned techniques used by PDs, full and part-time/adjunct faculty to evaluate the academic effectiveness of their program.

PDs/Full-Time Faculty:
Other than looking at your students' ARRT registry exam results and looking at how your program graduates performed compared to other programs in the ARRT annual report of examinations, what methods or techniques do you use to evaluate the academic effectiveness of your program or the particular courses you teach?

	N	Proportion
Work performance evaluations by former students' supervisors	721	.5090
Self-evaluations by former students	721	.2497
Evaluations of you or your program by former students	721	.3675
Peer evaluations by your fellow faculty members	721	.0915
A formal outcomes-assessment program (Please describe briefly)	721	.2455
Other (please specify)	721	.0180
Valid N (listwise)	721	

PT/Adjunct Faculty:

	N	Proportion of Those Checking an Approach
Work performance evaluations by your former students' supervisors	181	.5083
Self-evaluations by former students	181	.4199
Evalns of you or your progr by former students	181	.5083
Peer evaluations by your fellow faculty members	181	.1823
A formal outcomes-assessment program (Please describe briefly)	181	.1712
Other method of evaluating acad effectiveness	181	.0553
No response	35	.1988

PDs, full and part-time/adjunct faculty (93% = PD and FT, 76% = PT/Adjunct) indicate using qualitative data as part of evaluating the effectiveness of courses and programs, mostly as part of a permanent record that is tracked from year to year and as illustrative, anecdotal material in assessment reports.

PDs/Full-Time Faculty:
Do you use qualitative data (e.g., students' responses to open-ended questions or transcriptions of commends during assessment "focus groups") as part of your procedures for evaluating the effectiveness of your program and courses?

	Frequency	Percent	Valid Percent
N	41	5.7	6.8
Y	570	79.1	93.2
Total valid	611	84.8	100.0
Blank	110	15.3	
Total	721	100.0	

PT/Adjunct Faculty:

	Frequency	Percent	Valid Percent
N	35	16.2	23.6
Y	113	52.3	76.4
Total valid	148	68.5	100.0
No response	68	31.5	
Total	216	100.0	

PDs/Full-Time Faculty:
If yes, in what way(s):
Ways in which qualitative data are used:

Descriptive Statistics

Purpose for which Used	Proportion Using Qualitative Data in this Way
As illustrative, anecdotal material in assessment reports	.2768
To help understand what underlies the quantitative data	.2768
I convert the qualitative responses to quantitative summaries such as frequency tables by developing and applying a coding scheme for open-ended responses	.0955
To determine whether I need to expand the set of response alternatives in subsequent versions of the assessment questionnaire	.0799
As the sole basis for evaluating my program	.0312
As the sole basis for evaluating the courses I teach	.0799
As a part of the permanent record that is tracked from year to year	.3236
As a part of each year's report, but not in comparing year-to-year assessments	.0546
Other (please specify)	.0000
Valid N (listwise)	513

14

PT/Adjunct Faculty:
If yes, in what way(s):

Ways in which qualitative data are used:
10yes. Yes, selected which used

	Frequency	Percent	Valid Percent
I convert the qualitative responses to quantitative summaries such as frequency tables by developing and applying a coding scheme for open-ended responses	5	2.3	4.4
To determine whether I need to expand the set of response alternatives in subsequent versions of the assessment questionnaire	8	3.7	7.1
As illustrative, anecdotal material in assessment reports	20	9.3	17.7
As a part of each year's report, but not in comparing year-to-year assessments	3	1.4	2.7
As a part of the permanent record that is tracked from year to year	22	10.2	19.5
To help understand what underlies the quantitative data	37	17.1	32.7
As the sole basis for evaluating my program	5	2.3	4.4
As the sole basis for evaluating the courses I teach	10	4.6	8.9
Other (Please specify)	7	3.2	6.2
Total responding	103	47.7	100.0
No response	113	52.3	
Total	216	100.0	100.0

Outcomes Assessment

PDs, full and part-time/adjunct faculty rate "outcomes assessment," "somewhat to very helpful" (82.3% PDs and FT, 77.4% = PT/Adjunct) in improving teaching methods and outcomes.

PDs/Full-Time Faculty:
How helpful to you is outcomes assessment in improving your teaching methods and outcomes?

	Frequency	Percent	Valid Percent
Useless	7	1.0	1.1
Interesting, but irrelevant	9	1.2	1.4
Helps a little	94	13.0	15.2
Somewhat helpful	302	41.9	48.5
Very helpful	211	29.2	33.8
Total Valid	623	86.4	100.0
Blank	98	13.6	
Total	721	100.0	

Scoring "Useless" = 0, "Interesting" = 1, …, "Very helpful" = 4
Mean helpfulness = 3.12; median = 3.52.

PT/Adjunct Faculty:
How helpful to you is outcomes assessment in improving your teaching methods and outcomes?

	Frequency	Percent	Valid Percent	Cumulative Percent
Useless	2	.9	1.2	1.2
Helps a little	19	8.8	11.3	12.5
Interesting, but irrelevant	7	3.2	4.2	16.7
Somewhat helpful	74	34.3	44.0	60.7
Very helpful	66	30.6	39.3	100.0
Total valid	168	77.7	100.0	
I get no assessments	1	.5		
Blank	47	21.8		
Total	216	100.0		

Keeping Up With Innovators

Educators keep themselves informed of what innovators in medical imaging and radiation therapy education are up to by using multiple resources. "Radiologic technology newsletters and professional journals, archival journals," followed by "Workshops at state, regional conferences," then "ASRT Web sites (asrt.org, radsciresearch) were the most frequently cited (17.9%, 13.3%, 12.7% = PD and FT, 23.6% 12.8%, 12.1% = PT/Adjunct). Fourteen percent of part-time/adjunct educators indicate the use of "Newsletter and professional, archival journals published by physician societies" as a source for information on innovators in education. The mean value for the number of resources used to keep up with innovators is 4.76.

PDs/Full-Time Faculty:
What resources do you rely on to find out what the innovators in medical imaging and radiation therapy education are up to? Please check all that apply.

Resource	Name	Variable Count	Pct of Responses	Pct of Cases
Radiologic technology newsletters and professional, archival journals	Q13RTNWS	615	17.9	94.9
Newsletters and … archival journals Published by physician societies	Q13MDNWS	338	9.8	52.2
ASRT Web sites (asrt.org, radsciresearch)	Q13ASWEB	440	12.7	67.3
Other R.T. organizations' Web sites	Q13RTWEB	218	6.3	33.6
General Web surfing	Q13SURFG	291	8.5	44.9
Online CE materials	Q13ONLCE	163	4.7	25.2
Mail-order CE materials	Q13MAILO	92	2.7	14.2
Workshops at state, regional conferences	Q13WRKST	458	13.3	70.7
Workshops at national conferences	Q13WRKUS	360	10.5	55.6
Online academic courses	Q13ONLAC	72	2.1	11.1
On-campus academic courses	Q13OCACD	95	2.7	14.2
Other (please specify)	Q13OTHRE	46	1.3	7.1
ACERT and/or AERS	Q13AERS	250	7.3	38.6
		-------	-----	-----
Total responses		3434	100.0	529.9

73 blank cases; 648 valid cases

Number of resources employed to keep up with innovators:
NRESRCS

	Frequency	Percent	Valid Percent	Cumulative Percent
1.00	9	1.2	1.4	1.4
2.00	35	4.9	5.4	6.8
3.00	89	12.3	13.7	20.5
4.00	103	14.3	15.9	36.4
5.00	144	20.0	22.2	58.6
6.00	88	12.2	13.6	72.2
7.00	83	11.5	12.8	85.0
8.00	55	7.6	8.5	93.5
9.00	23	3.2	3.5	97.1
10.00	12	1.7	1.9	98.9
11.00	4	.6	0.6	99.5
12.00	3	.4	0.5	100.0
Valid	648	89.9	100.0	
None	73	10.1	10.1	
Total	721	100.0	100.0	

Mean = 4.76 resources; median = 4.71.
Considering only those who checked one or more resources, mean = 5.30; median = 4.67.

PT/Adjunct Faculty:
What resources do you rely upon to find out what the innovators in medical imaging and radiation therapy education are up to? Please check all that apply.

Resource Employed	Variable Name	Count	Pct of Responses	Pct of Cases
Radiologic technology newsletters and professional, archival journals	Q12RTNWS	175	23.6	88.8
Newsletter, and professional, archival journals published by physician soc's	Q12MDNWS	104	14.0	52.8
ASRT Web site(s)	Q12ASWEB	90	12.1	45.7
Web sites maintained by other radiologic technology organizations	Q12RTWEB	32	4.3	16.2
General Web surfing	Q12SURFG	58	7.8	29.4
Online CE materials	Q12ONLCE	56	7.5	28.4
ACERT and/or AERS	Q12AERS	22	3.0	11.2
Online academic courses	Q12ONLAC	9	1.2	4.6
Workshops at state, regional conferences	Q12WRKST	95	12.8	48.2
Workshops at national conferences	Q12WRKUS	42	5.7	21.3
On-campus academic courses	Q12OCACD	17	2.3	8.6
Mail-order CE materials	Q12MAILO	34	4.6	17.3
Other (please specify)	Q12OTHRE	9	1.2	4.6
Total responses		743	100.0	377.2

19 missing cases; 197 valid cases

Instructional Resources

Educators also draw upon a diverse range of resources in their teaching efforts. "Articles in professional journals" were indicated most often (93.1= PDs/FT, 86.9% = PT/Adjunct), followed by "ADVANCE (Radiography, Radiation Therapy)" (90.2% = PDs/FT, 78.9% = PT/Adjunct), "Articles in professional newsletters" (87.1% = PDs/FT, 80.7% PT/Adjunct), Curriculum guides prepared by national or regional professional societies" (86.4% + PD/FT, 71.3% = PT/Adjunct), "Articles in popular press" (85.4% PDs/FT, 80.7% =PT/Adjunct), "Fellow educators in the field" (81.0% PDs/FT, 76.1% PT/Adjunct), "Exam preparation software" (62.4% PD/FT, 35.2% PT/Adjunct) and "Commercial vendor printed materials" (62.4% PD/FT, 65.9% PT/Adjunct).

Resources not currently being used that educators indicated they would use if readily available and cost were not a barrier include: "Web-based simulations" (70.2% = PD/FT, 57.9% = PT/Adjunct), "Web-based forms for receipt of student data" (60.8% = PD/FT, 41.9% = PT/Adjunct), "Tutorials, drill and practice materials students can access on the Web" (57.6% = PDs/FT, 57.9% = PT/Adjunct), "Access to PACS system" (53.5% = PD/FT, 35.7% = PT/Adjunct) and "Radiography/radiation therapy clip art" (49.9% = PDs/FT, 45.8% = PT/Adjunct).

PDs/Full-Time Faculty:
Please circle which of the following resources you use in your teaching efforts. Further, for each resource you do not currently employ, please indicate whether you would use that resource if it were readily available and cost were not a barrier.

Resource	N Respond-ing	Percent who		
		Currently Use	Don't now, but would use	Don't now and wouldn't use
Curriculum guides prepared by national or regional professional society(ies)	601	86.4	10.6	3.0
Tutorials, drill programs, and other instructional materials students can access on the Web	550	36.4	57.6	6.0
Articles in professional journals	591	93.1	5.1	1.9
Articles in professional newsletters	543	87.1	6.8	6.1
Articles in the popular press (incl'ng newsmags)	471	85.4	5.7	8.9
ADVANCE (Radiography, Radiation Therapy)	512	90.2	5.3	4.5
AERS Quarterly	400	51.8	29.8	18.5
Chronicle of Higher Education	350	22.9	39.7	37.4
Community College Times	331	10.6	40.8	48.6
Radiography/radiation therapy clip art	493	38.5	49.9	11.6
Commercial vendor printed materials	521	62.4	27.1	10.6
Commercial vendor Web sites	488	58.0	26.6	15.4
Videotaped student presentations/projects	458	34.3	38.0	27.7
Videotaped lectures of content experts or guest lecturers	485	42.3	47.6	10.1
Exam preparation software	545	69.0	26.4	4.6
Web-administered content management service (Blackboard, Web CT)	486	46.1	37.0	16.9
Fellow educators in the field for guidance and reflection	536	81.0	16.2	2.8
Access to radiology PACS system	501	41.1	53.5	5.4
Web-based forms for receipt of student data	436	21.1	60.8	18.1
Web-based simulators (ECG, breath sounds ….)	449	12.7	70.2	17.1
Other (please specify)*	28	53.6	35.7	10.7

PT/Adjunct Faculty:
Please circle which of the following resources you use in your teaching efforts.   Further,
for each resource you do not currently employ, please indicate whether you would use that
resource if it were readily available and cost were not a barrier.

Resource	N Respond-ing	Percent who		
		Currently Use	Don't now, but would use	Don't now and wouldn't use
Curriculum guides prepared by national or regional professional society(ies)	154	71.3	22.1	11.0
Tutorials, drill programs, and other instructional materials students can access on the Web	140	31.4	57.9	10.7
Articles in professional journals	160	86.9	8.8	4.4
Articles in professional newsletters	145	80.7	13.1	6.2
Articles in the popular press (incl'ng newsmags)	136	72.8	15.4	11.8
ADVANCE (Radiography, Radiation Therapy)	128	78.9	10.9	10.2
AERS Quarterly	128	33.0	30.7	36.4
Chronicle of Higher Education	127	21.3	33.7	44.9
Community College Times	85	15.3	40.0	44.7
Radiography/radiation therapy clip art	118	25.4	45.8	28.8
Commercial vendor printed materials	129	65.9	24.8	9.3
Commercial vendor Web sites	113	45.1	34.5	20.4
Videotaped student presentations/projects	125	29.6	36.0	34.4
Videotapedlectures of content experts or guest lecturers	122	35.2	45.1	19.7
Exam preparation software	140	50.7	34.3	15.0
Web-administered content management service (Blackboard, Web CT)	111	31.5	31.5	36.9
Fellow educators in the field for guidance and reflection	155	76.1	18.1	5.8
Access to radiology PACS system	143	52.4	35.7	11.9
Web-based forms for receipt of student data	105	21.9	41.9	36.2
Web-based simulators (ECG, breath sounds ….)	107	12.1	57.9	29.9
Other (please specify)*	8	37.5	37.5	25.0

Research

PDs and full-time faculty were asked a series of questions to sample the degree to which they are currently involved in performing research in the field, their interest in performing research and barriers they see as limiting their ability to be engaged in conducting research.
Performing research is not an expectation in the majority of cases for PDs and full-time faculty (87.9%). The majority of PDs/Full-time faculty indicate they are not interested in performing research in the radiologic sciences (62.3%), but would be interested in accessing information on how to conduct a research project (52.1%). "Time" was given as a response by 276 of the 368 answers to the question, "What is seen as the greatest barrier to engaging in a research project of personal interest?"

15. Is performing research for publication an expectation of your current position?

	Frequency	Percent	Valid Percent
No	555	77.0	87.9
Yes	84	11.7	13.1
Total valid	639	88.7	100.0
Blank	82	11.4	
Total	721	100.0	100.0

Are you interested in performing research in the radiologic sciences?

	Frequency	Percent	Valid Percent
No	388	53.8	62.3
Unsure*	2	.3	0.5
Yes	232	32.2	37.2
Total valid	622	86.3	100.0
Blank	99	13.7	
Total	721	100.0	

*Not one of the response alternatives provided, but written in

Are you interested in being able to access information on how to conduct a research project?

	Frequency	Percent	Valid Percent
No	299	41.5	48.9
Yes	325	45.1	52.1
Total valid	624	86.6	100.0
Blank	97	13.4	
Total	721	100.0	

Summary and Conclusion

Part I of the Faculty Needs Assessment Summary Reviewed the demographics of the survey population: age, gender, marital status, ethnicity, years of experience in the field and years of experience in education. Years to retirement helped yield a perspective of the future opportunities for technologists to transition to education as a career path. Data indicate a faculty population weighted heavily toward Caucasian females in their mid-forties with more than 20 years experience in the profession. Part-time/adjunct faculty have far fewer years of experience as educators, often equal to the number of years in their current faculty position. The forecast for attrition within the survey population will be higher in part-time/adjunct faculty within the next five years compared to PDs and full-time faculty. A sizable turnover of all faculty positions is to be expected over the next 10 years.

Summary II outlined data regarding program structures, numbers of full and part-time/adjunct faculty, trends of the program applicant pool, faculty salaries, academic achievement and perceived weighting of the role of part-time/adjunct faculty during an annual performance evaluation. A rich mixture of educational programs exists in the radiologic sciences. A fabric of one- and two-year certificate programs to two-year certificate programs linked with academic institutions, to associate, bachelor and multimodality programs, stand ready to serve varying student populations. Average reported salaries for educators were calculated to be $58,988 for PDs, $48,833 for full-time and $38,240 for part-time faculty. Degree achievement within the population of educators indicates steady progress toward increasing the number of master's prepared PDs and bachelor's prepared full-time faculty.

Summary III has focused on the expression of participants' comfort in their current educator role, identification of priorities for personal development, creating a wish list of wants and needs to enhance instruction in the radiologic sciences, indicators for distance learning course consideration and a representation of program assessment activities. Data also reflect the resources educators use to enhance instruction and remain informed of innovators in the field. Becoming involved in research is not a requirement of many current educators, although they expressed interest in accessing information on how to conduct a research project. "Time" was the greatest limiting factor in pursuing research in an area of personal interest expressed in the survey.

A primary motivator for conducting the faculty development needs assessment was to use the data in strategic planning to set priorities for the limited resources available to the ASRT education and research department. The data collected will be of great value in maximizing internal organizational support for present and future educators. Services the ASRT education and research department can create will deepen the relationship and interdependencies with this key segment of the professional community.

A follow-up document titled "Where Do We Go from Here" will provide a road map of ASRT services and resources resulting from the faculty development needs assessment.