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Calculus-Based Physics

5 Year Market Review
Fall 2005 to Spring 2010

September 2010

A 5-year review of publisher market share and an in-depth analysis of adoption history of leading texts.

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Schools in TWM Database with Calculus-Based Physics Course Records

EXECUTIVE SUMMARY

The two most significant events affecting this market over the past 5 years were the consolidation of the Prentice Hall and Addison-Wesley lists under one sales/marketing organization and the advent of Mastering Physics.

The Pearson consolidation occurred during the summer of 2007 and the 12th edition of Young/Freedman was published in March 2007. The impact of these events is clearly represented in the sales curves for Young and Giancoli (see Chart 4 and Chart 6). *This is a case study in cannibalization.* By March of 2007, the Prentice Hall reps must have known that the reorganization was coming. What would have been a competing new edition from Addison-Wesley was now 'in the family'. And with Mastering Physics representing the future for Pearson and, certainly, coming soon with the next edition of Giancoli, there was no motivation (at the sales rep or management levels), to defend those adoptions. So you see an almost complete cannibalization of Giancoli's market share during the 2007/2008 academic year. When Giancoli 4/e published in 2009 with Mastering Physics, almost the entire base reverted back to the new edition. This is documented clearly in the Table B3 analysis, with 17 of 21 schools dropping and returning to Giancoli during this time period.

How did this impact overall publisher market share? Brooks/Cole and Serway (the #2 text in 05/06) had already begun its decline the year prior, but between 06/07 and 07/08, the loss doubled from 2% to 4%. Interestingly, Pearson only gained 2% during the same time period and only an additional .5% to date. Conclusion: it's not all about Mastering Physics.

As mentioned earlier, the Serway-Brooks/Cole slide began prior to the Summer of 2007, and it was Wiley, not Pearson, that was in gain-mode. Perhaps it was WileyPlus supporting the classic Halliday that moved adoptions during this time. And Wiley was seemingly immune to the Mastering Physics launch. In fact, 2008 saw new editions of all 5 market leaders - Young, Halliday, Knight, Serway and Tipler. Of these, only Young and Halliday posted market gains for the 2007/2008 year - Knight, Tipler, and most significantly, Serway, lost market share with their new editions.

Since 2007/2008 there have been minor shifts. Wiley, after posting a 5 year high for 08/09, fell a little over 1% for 09/10. Brooks/Cole dropped another .7% while Pearson gained .5%, as mentioned above.

With respect to specific adoption changes by author and brand loyalty, Young and Giancoli have inflated numbers due to the cannibalization back and forth, but both had net gains. As expected, Serway had the largest net loss of adoptions, with 80 moving from the book and only 45 moving to the book from another adoption. Surprisingly, however, most of the adoptions went to Halliday (18), although Young was a close second (17). As for brand loyalty as measured by % of adoption using the same text at the beginning and end of the 5 year period, Giancoli (despite a period of cannibalization) had the highest number (81.7%) followed by Halliday (77.8%). Serway had the lowest (62.6%). For further details see Tables B1 and B2 at the end of this report.

So it seems that web-based support has had an impact and is here to stay in the Calculus-Based Physics market. If Brooks/Cole can get this figured out, they should hypothetically be positioned to reclaim some of its losses of the past 5 years.

METHODOLOGY

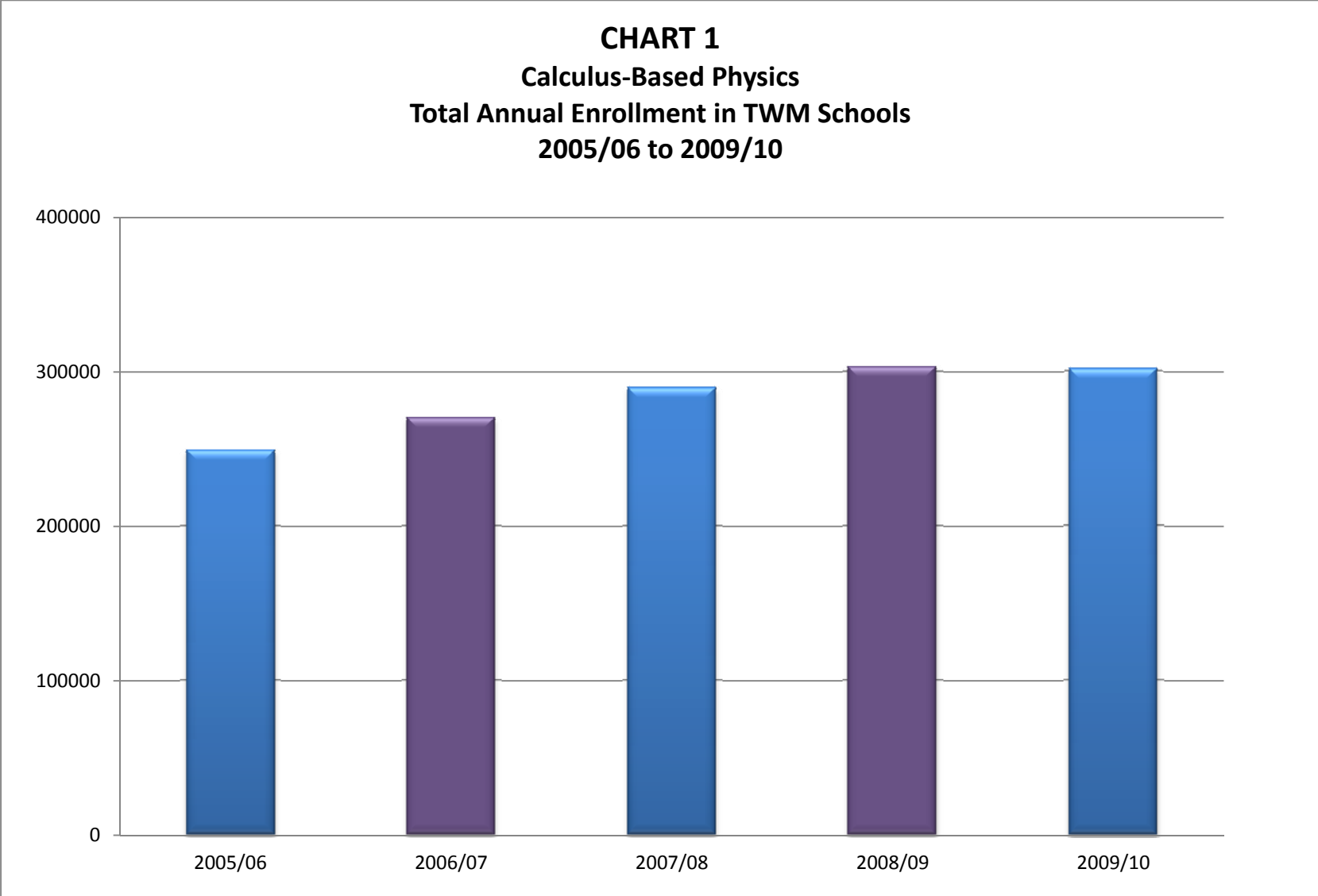
This analysis is based on a study of approximately 11,500 adoption records over a 5 year period at 350 4-year universities in the US and Canada. A 'calculus-based physics' adoption was defined as any course using any version of a physics (for scientists/engineers) textbook. This included multiple course tracks and every course section within a track. Prior to calculating market shares and market volatility, we completed an intensive hand-analysis for every school and corrected enrollment anomalies, data entry errors, and correctly identified source text/versions for custom adoptions. The end result was a very clean data set upon which to base our analysis.

Part A of this report consists of multiple market share analyses. The enrollment numbers on the enclosed charts are just that, enrollments. They do not indicate text sales (new or used) but rather number of students in a course where a particular course text was assigned. In many (most?) cases a student will buy 1 textbook for a 2 or 3 course sequence. So while the totals may not be useful for traditional textbook sales forecasting, they provide a more accurate indication of sales potential for the increasingly important "\$ per student" pricing model for multimedia/web-based course support products.

Part B of this report tracks change behavior/adoption volatility on an adoption by adoption basis, including multiple course tracks within each school. This was done through hand analysis of the data where specific course numbers were grouped by year. The results of the school by school analysis have been rolled up into a macro analysis of the market in order to report on frequency of change for specific textbooks. This is presented in a valuable one page reference: Table B1 – Calculus-Based Physics Market: Summary of Adoptions Changes by Author – 2005/06 to 2009/10. In addition to tracking change between textbooks, there are also metrics relating to brand loyalty in terms of staying with, or returning to, an author/product family over time.

In addition to the above mentioned items, additional charts/graphs and analysis are listed in the Table of Contents.

**PART A: CALCULUS-BASED PHYSICS MARKET
PUBLISHER MARKET SHARE**



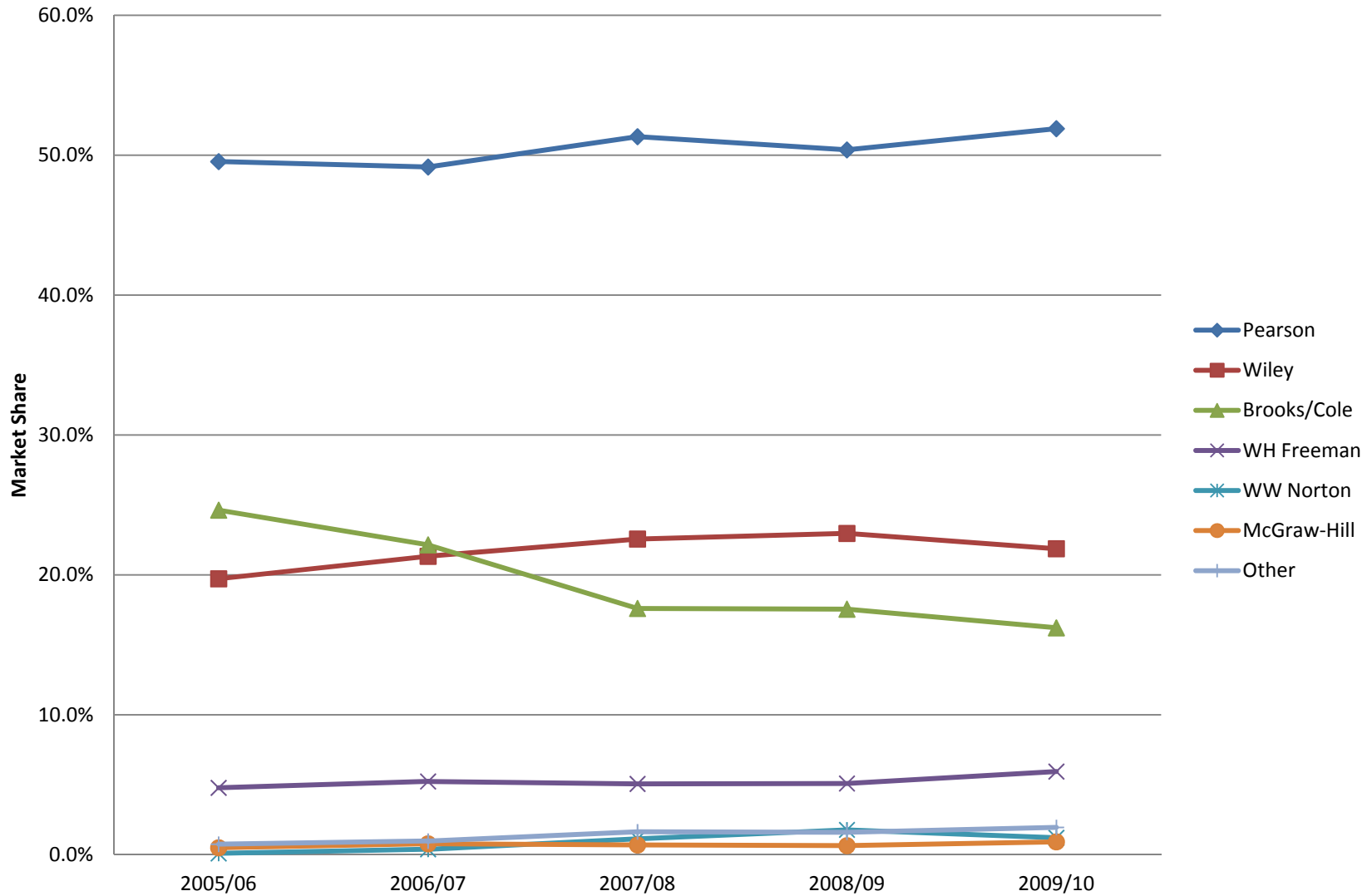
Source: TWM Research

TABLE 1
Calculus-Based Physics
Annual Market Share for Leading Publishers
2005/06 to 2009/10

Publisher	5-YEAR TOTAL		05/06		06/07		07/08		08/09		09/10	
	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%
Pearson	714,017	50.5%	123,378	49.5%	132,722	49.2%	148,652	51.3%	152,752	50.4%	156,513	51.9%
Wiley	307,631	21.8%	49,110	19.7%	57,591	21.3%	65,345	22.6%	69,629	23.0%	65,956	21.9%
Brooks/Cole	274,215	19.4%	61,340	24.6%	59,791	22.1%	50,974	17.6%	53,209	17.5%	48,901	16.2%
WH Freeman	74,023	5.2%	11,897	4.8%	14,128	5.2%	14,646	5.1%	15,432	5.1%	17,920	5.9%
WW Norton	13,574	1.0%	225	0.1%	1,041	0.4%	3,283	1.1%	5,376	1.8%	3,649	1.2%
McGraw-Hill	10,056	0.7%	1,234	0.5%	2,100	0.8%	2,005	0.7%	1,950	0.6%	2,767	0.9%
Other	19,943	1.4%	1,856	0.7%	2,624	1.0%	4,732	1.6%	4,850	1.6%	5,881	2.0%
TOTALS	1,413,459	100.0%	249,040	100.0%	269,997	100.0%	289,637	100.0%	303,198	100.0%	301,587	100.0%

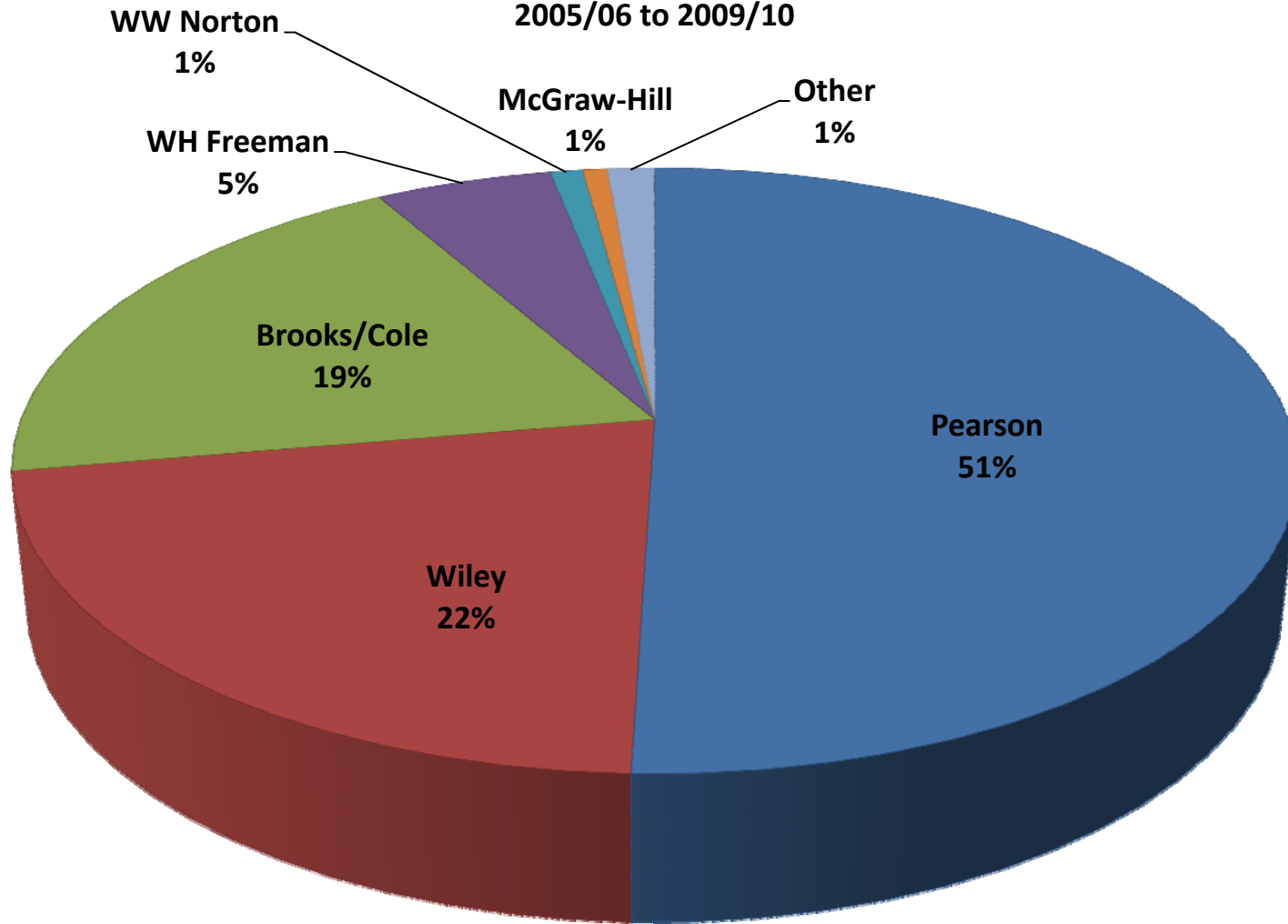
Source: TWM Research

CHART 2
Calculus-Based Physics
Annual Publisher Market Share
2005/06 to 2009/10



Source: TWM Research

CHART 3
Calculus-Based Physics
5-Year Publisher Market Share
2005/06 to 2009/10



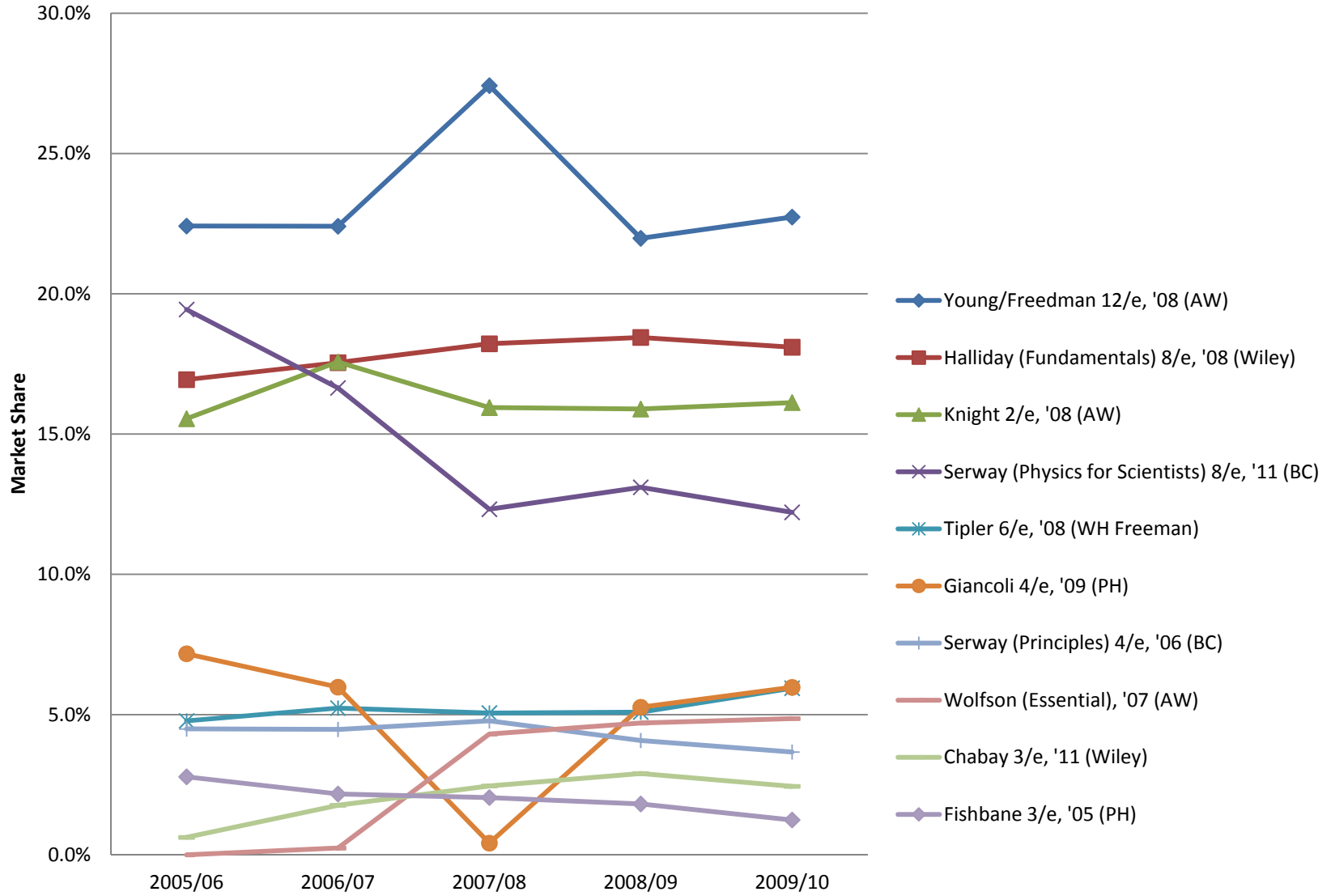
Source: TWM Research

TABLE 2
Calculus-Based Physics
Annual Market Share for Leading Titles
2005/06 to 2009/10

Title	5-YEAR TOTALS		05/06		06/07		07/08		08/09		09/10	
	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%
Young/Freedman 12/e, '08 (AW)	330,964	23.4%	55,824	22.4%	60,501	22.4%	79,425	27.4%	66,643	22.0%	68,571	22.7%
Halliday (Fund) 8/e, '08 (Wiley)	252,836	17.9%	42,188	16.9%	47,375	17.5%	52,772	18.2%	55,923	18.4%	54,578	18.1%
Knight 2/e, '08 (AW)	229,159	16.2%	38,718	15.5%	47,446	17.6%	46,184	15.9%	48,188	15.9%	48,623	16.1%
Serway (Phys for Sci) 8/e, '11 (BC)	205,604	14.5%	48,418	19.4%	44,941	16.6%	35,690	12.3%	39,729	13.1%	36,826	12.2%
Tipler 6/e, '08 (WH Freeman)	74,023	5.2%	11,897	4.8%	14,128	5.2%	14,646	5.1%	15,432	5.1%	17,920	5.9%
Giancoli 4/e, '09 (PH)	69,180	4.9%	17,855	7.2%	16,143	6.0%	1,213	0.4%	15,958	5.3%	18,011	6.0%
Serway (Principles) 4/e, '06 (BC)	60,500	4.3%	11,178	4.5%	12,070	4.5%	13,835	4.8%	12,361	4.1%	11,056	3.7%
Wolfson (Essential), '07 (AW)	42,015	3.0%	0	0.0%	650	0.2%	12,473	4.3%	14,246	4.7%	14,646	4.9%
Chabay 3/e, '11 (Wiley)	29,611	2.1%	1,554	0.6%	4,775	1.8%	7,114	2.5%	8,797	2.9%	7,371	2.4%
Fishbane 3/e, '05 (PH)	27,969	2.0%	6,933	2.8%	5,862	2.2%	5,917	2.0%	5,503	1.8%	3,754	1.2%
Halliday (Honors) 5/e, '01 (Wiley)	15,778	1.1%	2,572	1.0%	3,252	1.2%	3,890	1.3%	3,097	1.0%	2,967	1.0%
Wolfson/Pasachoff 3/e, '99 (AW)	14,730	1.0%	4,048	1.6%	2,120	0.8%	3,440	1.2%	2,214	0.7%	2,908	1.0%
Ohanian 3/e, '08 (WW Norton)	13,574	1.0%	225	0.1%	1,041	0.4%	3,283	1.1%	5,376	1.8%	3,649	1.2%
Moore 3/e, '06 (MH)	10,056	0.7%	1,234	0.5%	2,100	0.8%	2,005	0.7%	1,950	0.6%	2,767	0.9%
Cummings, '03 (Wiley)	9,406	0.7%	2,796	1.1%	2,189	0.8%	1,569	0.5%	1,812	0.6%	1,040	0.3%
Reese, '00 (BC)	5,671	0.4%	1,096	0.4%	1,726	0.6%	1,121	0.4%	955	0.3%	773	0.3%
Hecht, 2/e '00 (BC)	2,440	0.2%	648	0.3%	1,054	0.4%	328	0.1%	164	0.1%	246	0.1%
Other	19,943	1.4%	1,856	0.7%	2,624	1.0%	4,732	1.6%	4,850	1.6%	5,881	2.0%
Total	1,413,459	100.0%	249,040	100.0%	269,997	100.0%	289,637	100.0%	303,198	98.8%	301,587	100.0%

Source: TWM Research

CHART 4
Calculus-Based Physics
Annual Market Share for Top Ten Titles
2005/06 to 2009/10



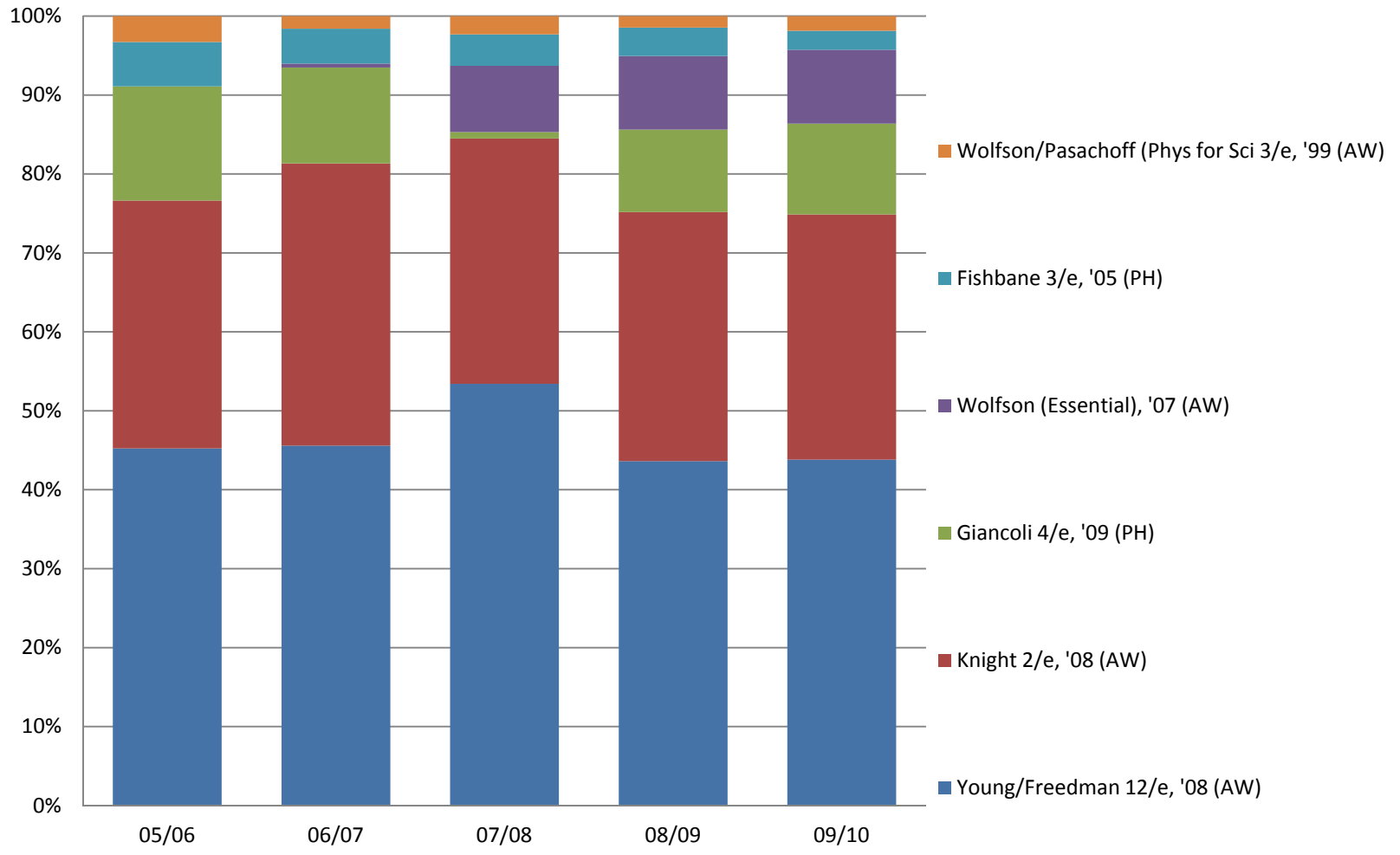
Source: TWM Research

TABLE 3
Calculus-Based Physics
Pearson Publishing
Breakdown of Sales of Leading Titles
2005/06 – 2009/10

TITLES	TOTALS		2005/06		2006/07		2007/08		2008/09		2009/10	
	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%
Young/Freedman 12/e, '08 (AW)	330,964	46.4%	55,824	45.2%	60,501	45.6%	79,425	53.4%	66,643	43.6%	68,571	43.8%
Knight 2/e, '08 (AW)	229,159	32.1%	38,718	31.4%	47,446	35.7%	46,184	31.1%	48,188	31.5%	48,623	31.1%
Giancoli 4/e, '09 (PH)	69,180	9.7%	17,855	14.5%	16,143	12.2%	1,213	0.8%	15,958	10.4%	18,011	11.5%
Wolfson (Essential), '07 (AW)	42,015	5.9%	0	0.0%	650	0.5%	12,473	8.4%	14,246	9.3%	14,646	9.4%
Fishbane 3/e, '05 (PH)	27,969	3.9%	6,933	5.6%	5,862	4.4%	5,917	4.0%	5,503	3.6%	3,754	2.4%
Wolfson/Pasachoff (Phys for Sci 3/e, '99 (AW)	14,730	2.1%	4,048	3.3%	2,120	1.6%	3,440	2.3%	2,214	1.4%	2,908	1.9%
Total	714,017	100%	123,378	100%	132,722	100%	148,652	100%	152,752	100%	156,513	100%

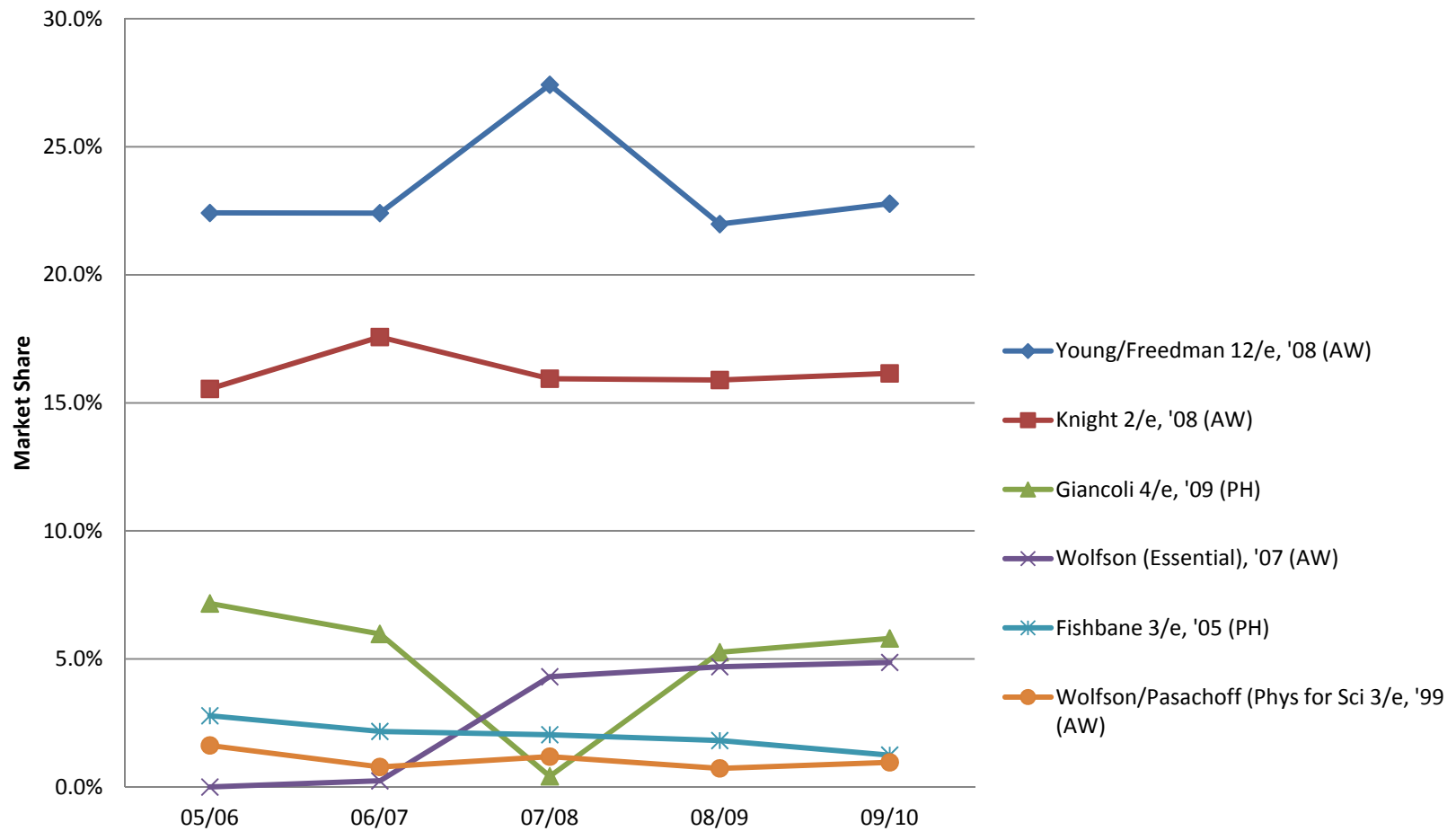
Source: TWM Research

CHART 5
Calculus-Based Physics Market
Pearson Publishing
Breakdown of Sales of Leading Titles
2005/06 to 2009/10



Source: TWM Research

CHART 6
Calculus-Based Physics
Pearson Publishing
Annual Market Share of Leading Titles
2005/06 to 2009/10



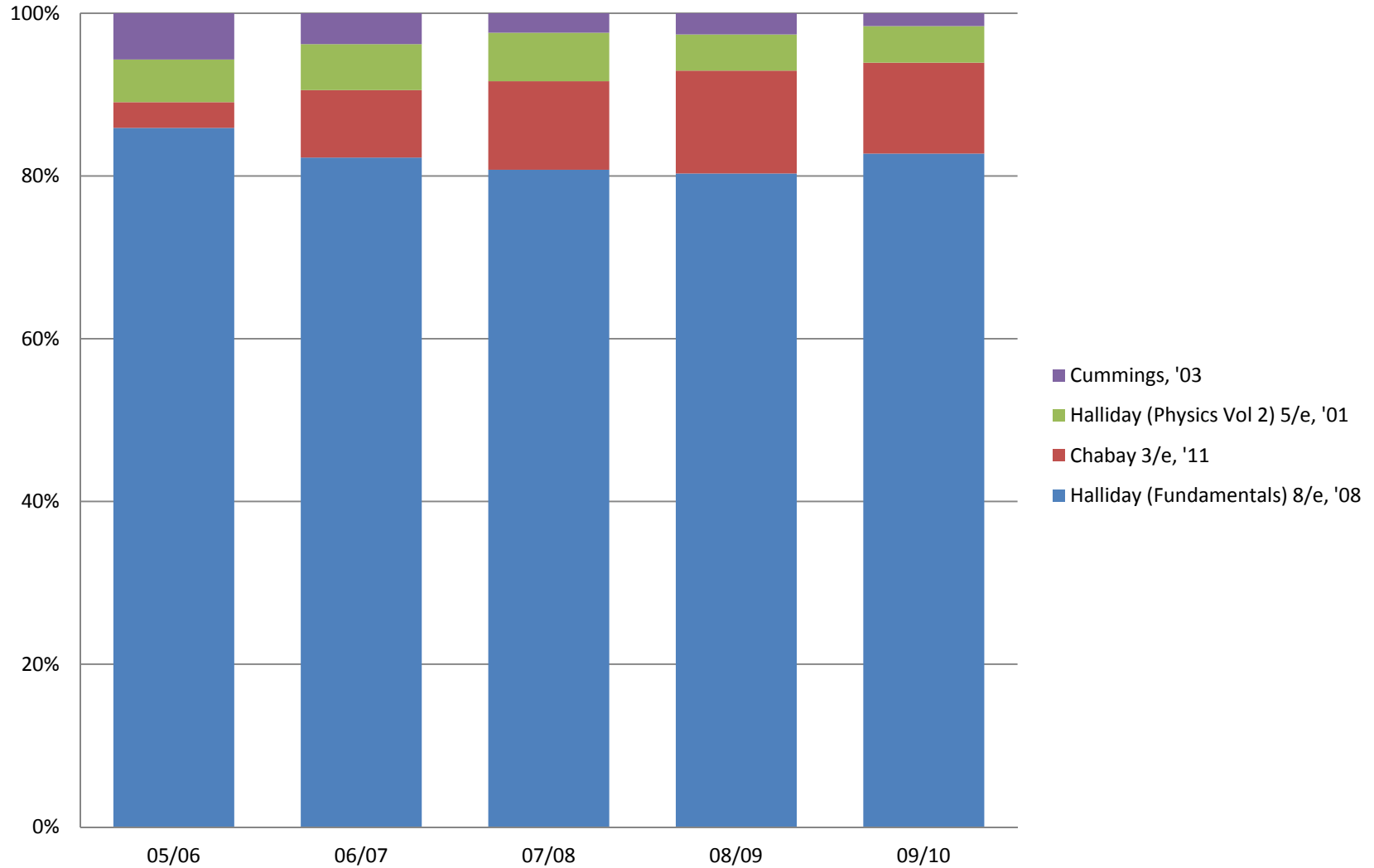
Source: TWM Research

TABLE 4
Calculus-Based Physics
Wiley Publishing
Breakdown of Sales of Leading Titles
2005/06 – 2009/10

	TOTALS		2005/06		2006/07		2007/08		2008/09		2009/10	
	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%
Halliday (Fundamentals) 8/e, '08	252,836	82.2%	42,188	85.9%	47,375	82.3%	52,772	80.8%	55,923	80.3%	54,578	82.7%
Chabay 3/e, '11	29,611	9.6%	1,554	3.2%	4,775	8.3%	7,114	10.9%	8,797	12.6%	7,371	11.2%
Halliday (Physics Vol 2) 5/e, '01	15,778	5.1%	2,572	5.2%	3,252	5.6%	3,890	6.0%	3,097	4.4%	2,967	4.5%
Cummings, '03	9,406	3.1%	2,796	5.7%	2,189	3.8%	1,569	2.4%	1,812	2.6%	1,040	1.6%
Total	307,631	100%	49,110	100%	57,591	100%	65,345	100%	69,629	100%	65,956	100%

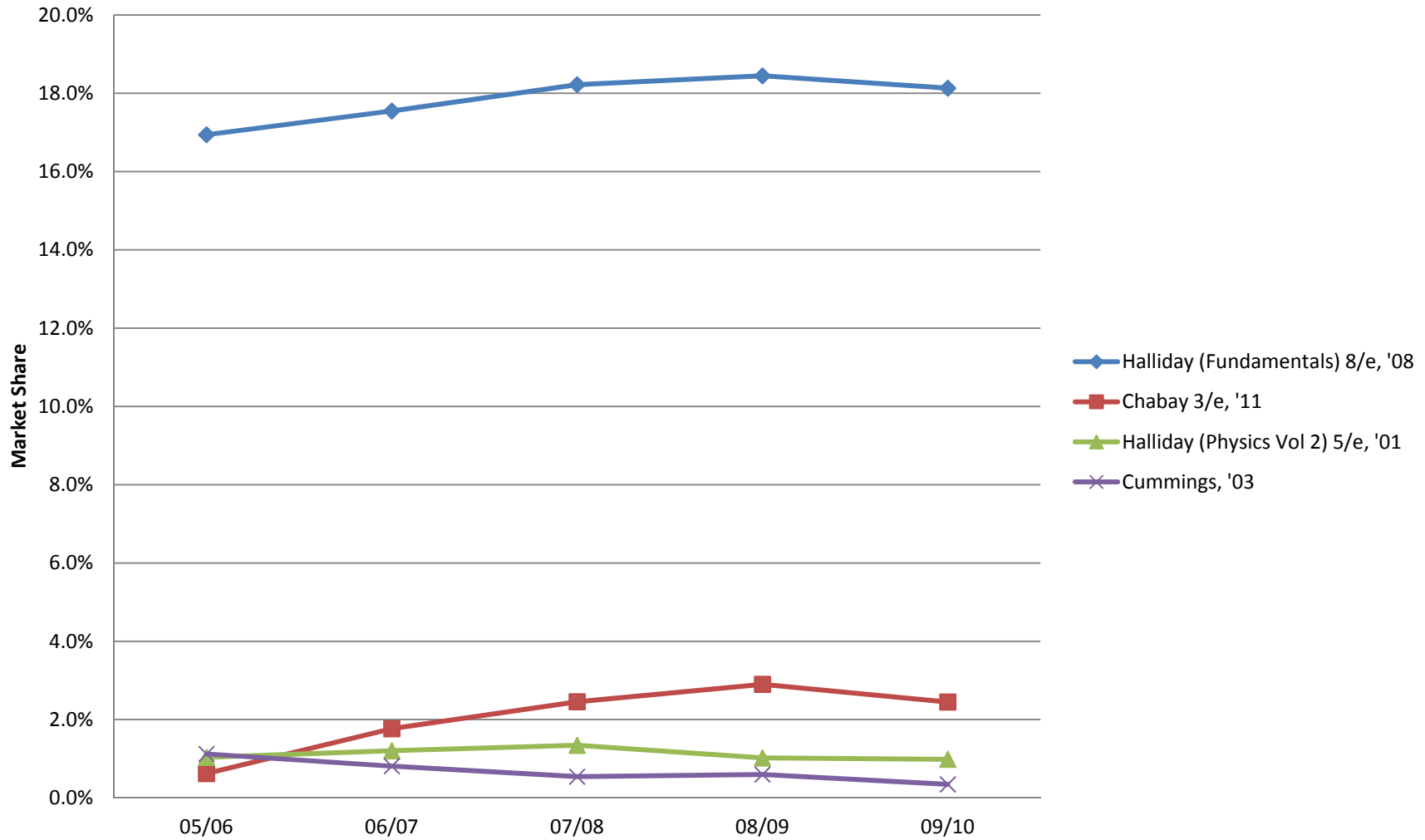
Source: TWM Research

CHART 7
Calculus-Based Physics
Wiley Publishing
Breakdown of Sales of Leading Titles
2005/06 to 2009/10



Source: TWM Research

CHART 8
Calculus-Based Physics
Wiley Publishing
Market Share of Leading Titles
2005/06 to 2009/10



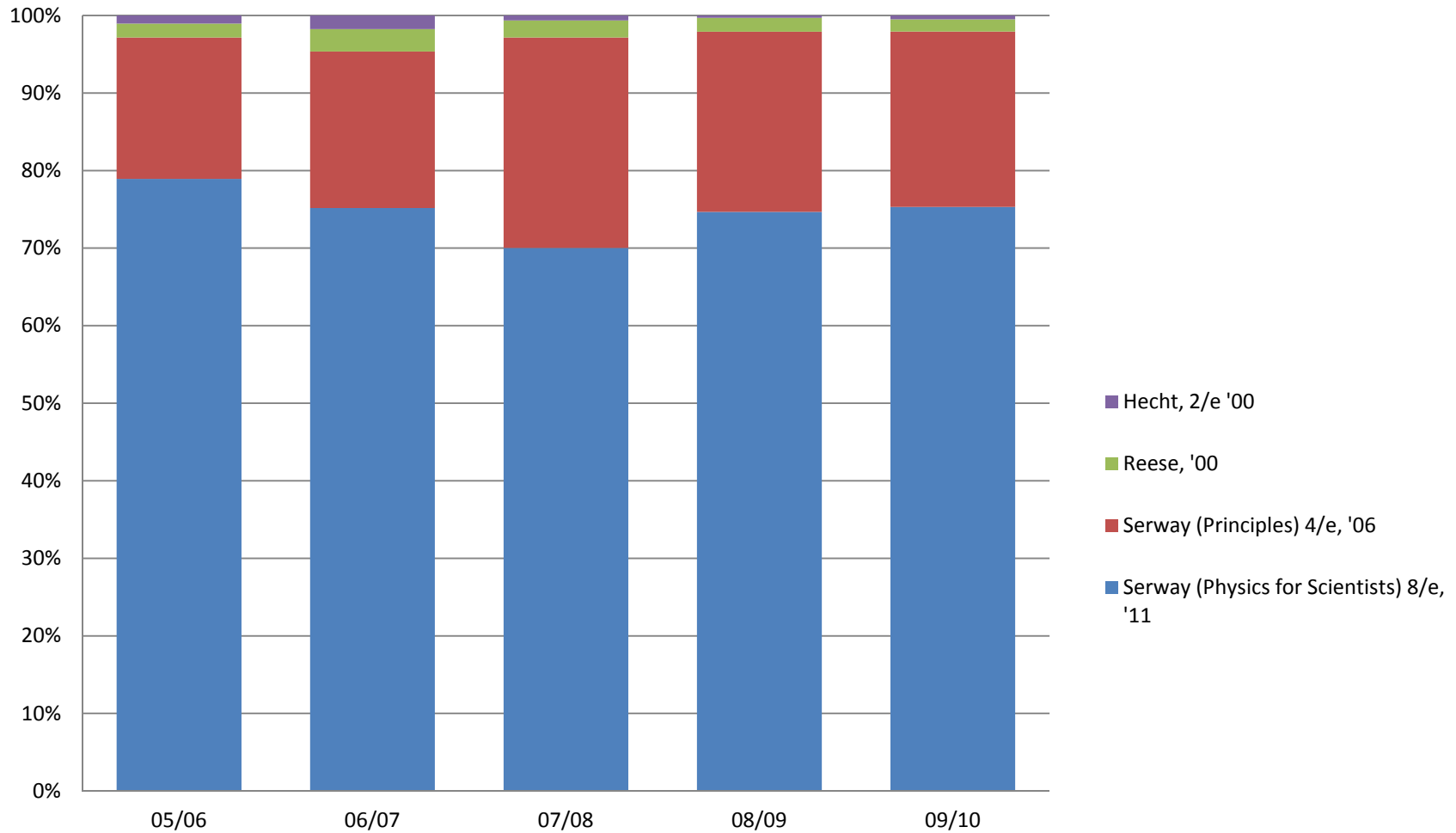
Source: TWM Research

TABLE 5
Calculus-Based Physics
Brooks/Cole Publishing
Breakdown of Sales of Leading Titles
2005/06 – 2009/10

	TOTALS		2005/06		2006/07		2007/08		2008/09		2009/10	
	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%	Enroll	%
Serway (Physics for Scientists) 8/e, '11	205,604	75.0%	48,418	78.9%	44,941	75.2%	35,690	70.0%	39,729	74.7%	36,826	75.3%
Serway (Principles) 4/e, '06	60,500	22.1%	11,178	18.2%	12,070	20.2%	13,835	27.1%	12,361	23.2%	11,056	22.6%
Reese, '00	5,671	2.1%	1,096	1.8%	1,726	2.9%	1,121	2.2%	955	1.8%	773	1.6%
Hecht, 2/e '00	2,440	0.9%	648	1.1%	1,054	1.8%	328	0.6%	164	0.3%	246	0.5%
Total	274,215	100%	61,340	100%	59,791	100%	50,974	100%	53,209	100%	48,901	100%

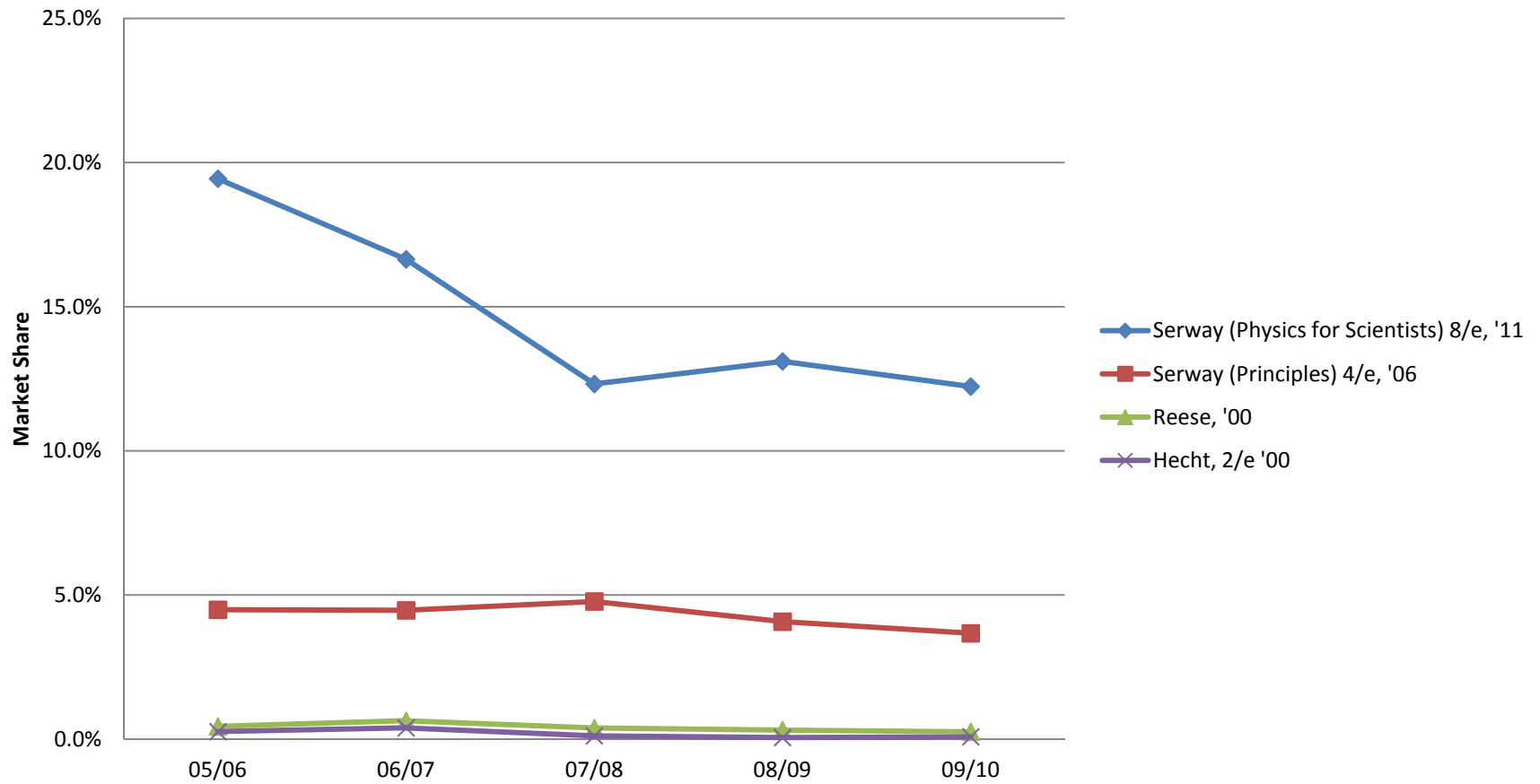
Source: TWM Research

CHART 9
Calculus-Based Physics
Brooks/Cole Publishing
Breakdown of Sales of Leading Titles
2005/06 to 2009/10



Source: TWM Research

CHART 10
Calculus-Based Physics
Brooks/Cole Publishing
Annual Market Share of Leading Titles
2005/06 to 1009/10



Source: TWM Research

PART B: CALCULUS-BASED PHYSICS MARKET UNIVERSITY ADOPTION INFORMATION

Summary for Period from Spring 2005 through Spring 2010

Total Number of Schools in Database with History of Calculus-Based Physics	348
1. Total Number of Schools that Did not Change Adoptions for at Least One Course	245 (70%)
2. Schools that did not Change Adoptions in any Calculus-Based Physics Course	153 (44%)
- Using One Text for all Calculus-Based Physics Courses	120 (34%)
- Using Different Texts for Different Calculus-Based Physics Courses	33 (10%)
3. Schools that Changed Adoptions for at least one Track	195 (56%)
- Schools that Changed Adoptions Once	101 (29%)
- Schools that Changed Multiple Times	94 (27%)
o Reverting Back to Original Text	50 (14%)
Total Number Returning to:	
1. Giancoli	18
2. Halliday	9
3. Serway	9
4. Young/Freedman	7
5. Knight	3
6. Tipler	3
7. Reese	1
8. Wolfson/Pasachof	1
o Ending with a Different Adoption	44 (13%)

1. Schools that did not Change Adoptions for at Least One Course

245 schools (70%)

In 245 schools, or 70% of total, there was at least one course for which the textbook remained the same throughout the period covered by the TWM database. The table below summarizes this information. Please note that the total number of schools shown below totals more than 245, as a number of schools used more than one author's textbook throughout the period in different courses and each one was counted. Multiple courses with the same text in the same school, however, were only counted once.

The % of Schools column indicates what percentage of the 245 schools used each text. Again, as some schools used multiple texts, these percentages total more than 100%.

Author	# of Schools	% of Schools
Benson	2	0.8%
Chabay	7	2.9%
Cummings	3	1.2%
Fishbane	6	2.4%
Giancoli	13	5.3%
Halliday (Fund)	59	24.1%
Halliday (Honors)	16	6.5%
Hecht	2	0.8%
Knight	43	17.6%
Moore	11	4.5%
Ohanian	3	1.2%
Reese	2	0.8%
Resnick	1	0.4%
Saslow	4	1.6%
Serway (Physics)	52	21.2%
Serway (Principals)	8	3.3%
Tipler	21	8.6%
Wolfson	5	2.0%
Wolfson/Pasachof	5	2.0%
Young/Freedman	58	23.7%
Other	2	0.8%

2. Schools that did not Change Adoptions during the Period

a. Used Single Text – 120 schools (34%)

Author/Family	# of Schools	% of Schools
Benson	1	0.8%
Cummings	2	1.7%
Giancoli	3	2.5%
Halliday (Fund)	33	27.5%
Halliday (Honors)	2	1.7%
Knight	14	11.7%
Lea	1	0.8%
Ohanian	1	0.8%
Serway (Physics)	29	24.2%
Serway (Principals)	2	1.7%
Tipler	6	5.0%
Wolfson/Pasachof	1	0.8%
Young/Freedman	25	20.8%
Total	120	100.0%

School	Years of Data	Text Used Throughout
Alabama A&M University	F06 - S08	Tipler
Alfred State College	F08 - S10	Serway
Arkansas State University	F05 - S10	Serway
Arkansas Tech University	S06 - S10	Halliday
Ball State University	F09	Young/Freedman
Boise State University	S06 - S10	Knight
Brigham Young University	F05 - S10	Serway
Brooklyn College of CUNY	F09 - S10	Serway
California State University-Dominguez Hills	F06 - S10	Serway
California State University-Fresno	F05 - S10	Serway
California State University-Fullerton	F05 - S10	Halliday
California State University-Los Angeles	F06 - S10	Serway
Central Michigan University	F05 - S10	Halliday
Christian Brothers University	F05 - S09	Serway
Clarkson University	F05 - S10	Halliday
Cleveland State University	S06 - S10	Halliday
DePaul University	F09 - S10	Cummings
Eastern Kentucky University	S09 - S10	Young/Freedman
Embry-Riddle Aeronautical University-Prescott	F05 - S10	Young/Freedman

› Note: “Halliday” indicates Halliday’s *Fundamentals of Physics* while “Halliday (H)” denotes Honors (Vol 2). “Serway” indicates *Physics for Scientists and Engineers*, While “Serway (P)” denotes Serway’s *Principals*.

School	Years of Data	Text Used Throughout
Ferris State University	F07 - F09	Knight
Florida International University	F05 - S10	Young/Freedman
Gannon University	S08 - S10	Halliday
Georgia Southern University	F09 - S10	Knight
Georgia State University	F05 - F09	Knight
Glendale Community College	F05 - S07	Halliday
Grambling State University	S06 - S10	Serway
Harvey Mudd College	F09	Halliday
Hunter College of CUNY	F09 - S10	Halliday
Indiana University	F06 - S10	Halliday
Indiana University, Purdue University-Indianapolis	F05 - S10	Young/Freedman
Iowa State University	F05 - S10	Young/Freedman
Kennesaw State University	F06 - S10	Serway
Kent State University	S09 - S10	Cummings
Kettering University	F05 - S10	Knight
Lafayette College	F08 - S10	Halliday
Lamar University	F06 - S10	Halliday
Lawrence Technological University	F06 - S10	Tipler
Los Angeles Valley College	S06 - S10	Giancoli
Louisiana State University	F05 - S10	Halliday
Louisiana Tech University	F05 - S10	Halliday
Loyola Marymount University	F05 - S10	Serway
Manhattan College	F05 - S10	Serway
McGill University	F05 - W10	Serway
McNeese State University	F07	Young/Freedman
Memorial University of Newfoundland	F05 - W10	Serway
Mesa Community College	F05 - S07	Serway
Miami University	F05 - S10	Knight
Michigan Technological University	F05 - S10	Knight
Montana College of Mineral Science & Technology	F05 - S10	Serway
Morgan State University	F05 - S10	Serway
Naval Postgraduate School	W07 - W10	Halliday
New York City College of Technology	F08 - S10	Giancoli
New York Institute of Technology	F08 - S10	Young/Freedman
North Carolina A&T State University	F05 - S10	Young/Freedman
Northeastern University	F07 - S10	Tipler
Northern Arizona University	F05 - S09	Serway
Northern Kentucky University	F09 - S10	Knight
Nova Southeastern University	F09	Giancoli
Oakland University	F05 - W10	Serway (P)

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School	Years of Data	Text Used Throughout
Occidental College	S06	Wolfson/Pasachof
Portland State University	F05 - W10	Halliday
Purdue University-Calumet	F05 - S10	Young/Freedman
Sam Houston State University	F09 - S10	Halliday
San Diego State University	F05 - S10	Serway
San Francisco State University	F05 - S10	Lea
San Jose State University	F05 - S10	Young/Freedman
Scottsdale Community College	F05 - S07	Serway
Southern University	F05 - S10	Halliday
St Louis University	F09 - S10	Halliday (H)
Stanford University	F05 - W10	Knight
SUNY Albany	S08 - S10	Serway
The Citadel	F08 - F09	Serway
Towson University	F09 - S10	Tipler
Tuskegee University	F05 - F09	Benson
United States Military Academy	F06	Halliday (H)
University of Alabama-Birmingham	F05 - S10	Halliday
University of Alabama-Huntsville	F05 - S10	Halliday
University of Dayton	F05 - S10	Tipler
University of Denver	F05 - S07	Halliday
University of Hartford	F05 - S10	Halliday
University of Houston-Clear Lake	S07 - S10	Young/Freedman
University of Idaho	F05 - S10	Serway
University of Illinois-Chicago	F05 - S10	Young/Freedman
University of Kentucky	F05 - S10	Serway
University of Louisiana at Lafayette	F05 - S10	Halliday
University of Michigan-Dearborn	F06 - W10	Halliday
University of Missouri-Kansas City	S09 - S10	Serway
University of Nebraska-Lincoln	F05 - S10	Young/Freedman
University of Nebraska-Omaha	F05 - S07	Young/Freedman
University of New Haven	F05 - S10	Young/Freedman
University of New Orleans	S06 - S10	Halliday
University of North Carolina at Pembroke	S10	Halliday
University of North Carolina-Charlotte	F05 - S10	Knight
University of North Florida	F09 - S10	Halliday
University of Northern Iowa	F09 - S10	Young/Freedman
University of Portland	F06 - S10	Halliday
University of Rhode Island	F05 - S10	Tipler
University of Saskatchewan	F05 - S10	Serway
University of Scranton	F05 - S10	Knight

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School	Years of Data	Text Used Throughout
University of South Alabama	F05 - S10	Halliday
University of South Carolina	F05 - S10	Halliday
University of South Florida	F05 - S10	Serway
University of Southern Mississippi	S09 - S10	Halliday
University of Texas-Brownsville	F09 - S10	Serway (P)
University of Texas-Dallas	F05 - S10	Young/Freedman
University of Texas-El Paso	F05 - S10	Young/Freedman
University of Texas-Pan American	F09 - S10	Serway
University of the Pacific	S09 - S10	Halliday
University of West Florida	F06 - S10	Knight
University of Windsor	F06 - W10	Halliday
University of Wisconsin-Oshkosh	S10	Ohanian
University of Wyoming	F05 - S10	Young/Freedman
Utah State University	F05 - S10	Knight
Utah Valley University	F09 - S10	Young/Freedman
Virginia Polytechnic Institute	F05 - S10	Young/Freedman
Virginia State University	F05 - S10	Young/Freedman
West Virginia University	F05 - S10	Young/Freedman
Western Kentucky University	S09 - S10	Young/Freedman
Western Michigan University	F05 - S10	Serway
Western New England College	F05 - S10	Knight

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

2. Schools that did not Change Adoptions during the Period
a. Used Multiple Texts – 33 schools (10%)

Author	# of Schools	% of Schools
Chabay	2	6.1%
Fishbane	1	3.0%
Giancoli	1	3.0%
Halliday (Fund)	11	33.3%
Halliday (Honors)	6	18.2%
Knight	9	27.3%
Mazur	1	3.0%
Moore	4	12.1%
Saslow	4	12.1%
Serway (Physics)	13	39.4%
Serway (Principals)	2	6.1%
Tipler	5	15.2%
Wolfson	1	3.0%
Young/Freedman	12	36.4%

PLEASE NOTE: The following convention was used in the table below. When there are multiple authors shown in a column, and the names are separated by a semi-colon, this indicates that there are multiple tracks, and different books were being used in each track. If there were different tracks but the same text was used in all, then no differentiation was made. So at Auburn University, shown below, “Serway; Halliday” can be understood to mean that there were at least two different tracks for which these separate adoptions were used during the period F05 – S10.

School	Years of Data	Text Used Throughout
Auburn University	F05 - S10	Serway; Halliday
Boston College	F05 - S10	Halliday; Halliday (H)
Carnegie Mellon University	F05 - S10	Young/Freedman; Chabay
Cornell University	F05 - S10	Young/Freedman; Halliday
Dalhousie University	F06 - W10	Knight; Young/Freedman
Fordham University	F09	Halliday; Giancoli
Georgia Institute of Technology	F05 - S10	Knight; Saslow
James Madison University	F09 - S10	Knight; Serway
Milwaukee School of Engineering	F05 - S10	Halliday; Tipler; Serway
Montclair State University	S09 - S10	Serway; Saslow
Penn State University	F05 - S10	Halliday; Halliday (H)
Purdue University	F05 - S10	Chabay; Tipler; Moore

Note: “Halliday” indicates Halliday’s *Fundamentals of Physics* while “Halliday (H)” denotes Honors (Vol 2). “Serway” indicates *Physics for Scientists and Engineers*, While “Serway (P)” denotes Serway’s *Principals*.

School	Years of Data	Text Used Throughout
Queens College of CUNY	S09 - S10	Serway; Tipler
Rice University	F05 - S10	Fishbane; Knight
Ryerson University	F08	Knight; Serway
Santa Monica College	S08 - S10	Knight; Young/Freedman
Texas A&M University	F05 - S10	Young/Freedman; Saslow
United States Naval Academy	F08 - S10	Serway; Tipler
University of Alabama	F05 - S10	Serway; Young/Freedman
University of Arkansas	F05 - S10	Mazur; Young/Freedman
University of California-Irvine	F05 - S10	Serway (P); Serway
University of California-Santa Barbara	F05 - S10	Young/Freedman; Halliday (H)
University of Florida	F05 - S10	Halliday; Halliday (H)
University of Illinois at Urbana-Champaign	F05 - S10	Young/Freedman; Tipler; Serway
University of Manitoba	F09 - W10	Halliday; Saslow
University of New Brunswick	F08 - W10	Knight; Wolfson
University of North Carolina-Chapel Hill	F05 - S10	Halliday (H); Moore
University of North Texas	F05 - S10	Serway (P); Serway
University of Toronto	F05 - W10	Halliday; Knight; Serway; Moore
University of Utah	F05 - S10	Young/Freedman; Serway; Halliday (H)
University of Western Ontario	F05 - S10	Young/Freedman; Halliday
Washington University	F05 - S10	Young/Freedman; Moore
Weber State University	F05 - S10	Knight, Halliday

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

3. Schools that Changed Adoptions during the Period

- 195 schools (56%)

Within these schools, there were 92 institutions that did not change textbooks for at least one course throughout the period. These are summarized in the table below, and broken out in detail in the following tables.

Author	# of Schools	% of Schools
Benson	1	1.1%
Chabay	5	5.4%
Cummings	1	1.1%
Fishbane	5	5.4%
Giancoli	9	9.8%
Halliday (Fund)	15	16.3%
Halliday (Honors)	8	8.7%
Hecht	2	2.2%
Knight	20	21.7%
Moore	7	7.6%
Ohanian	2	2.2%
Reese	2	2.2%
Resnick	1	1.1%
Serway (Physics)	10	10.9%
Serway (Principals)	4	4.3%
Tipler	10	10.9%
Wolfson	4	4.3%
Wolfson/Pasachof	4	4.3%
Young/Freedman	21	22.8%

a. Changed Adoptions Once per Course – 101 schools (29%)

PLEASE NOTE: The following convention was used in the table below. When there are multiple authors shown in a column, and the names are separated by a semi-colon, this indicates that there are multiple tracks, and different books were being used in each track. If there were different tracks but the same author family was used in all, then no differentiation was made. In many cases, there are entries in both the One Text and Changed Adoptions Once columns. In these cases, some courses had no adoption changes while others had one change during the period. When there is only one entry for a school, as in CUNY-City College, for example, then all tracks changed adoptions as noted, with similar timing.

School	Years of Data	Text Used Throughout	Changed Adoptions Once
Binghamton University	F05 - S10	Halliday; Knight	F08 - Serway (P) to Giancoli
Bowling Green State	F05 - S09		F08 - Cummings to Halliday
Brown University	F05 - S10	Young/Freedman; Halliday	F09 - Halliday to Giancoli
Bucknell University	F05 - S10		F07 - Tipler to Wolfson
California Institute of Tech	F05 - W10	Serway	F07 - Serway to Ohanian
Cal Poly - San Luis Obispo	F05 - S10		F08 - Knight to Young/Freedman
California State -Chico	F06 - F09	Young/Freedman	F08 - Young/Freedman to Knight
California State -Long Beach	F05 - S10		F08 - Moore to Giancoli; F07 - Young/Freedman to Chabay; F08 - Young/Freedman to Tipler
Cal State - Sacramento	F05 - S10	Halliday	F06 - Halliday to Young/Freedman
Cal State - San Bernardino	S09 - S10	Giancoli	S10 - Young/Freedman to Giancoli
Carleton College	F06 - F09	Giancoli; Knight; Moore	W07 - Cummings to Giancoli
Carleton University	F05 - W10	Fishbane; Hecht	W08 - Halliday to Knight; W10 - Chabay to Fishbane
CUNY - City College	F05 - S10		F07 - Young/Freedman to Serway
Clemson University	F05 - S10		S07 - Serway to Knight
Colorado School of Mines	F05 - W10		W07 - Young/Freedman to Tipler
Columbia University	F05 - S10	Halliday; Fishbane	F07 - Cummings to Halliday
Columbus State University	S07 - F09	Tipler	S08 - Young/Freedman to Knight
Creighton University	S06 - S10		F09 - Young/Freedman to Knight
Eastern Michigan University	W06 - S10		F06 - Serway to Young/Freedman
Fairleigh Dickinson Univ	F06 - S10		F08 - Cummings to Knight
Florida Atlantic University	F06 - S10	Tipler	F07 - Tipler to Serway
Florida Institute of Tech	F05 - S10		F07 - Halliday to Young/Freedman; F08 - Tipler to Young/Freedman
George Mason University	F05 - S10		F07 - Giancoli to Young/Freedman
George Washington	F05 - S10		S08 - Young/Freedman to Knight
Gonzaga University	F05 - S10		S07 - Serway to Halliday
Grand Valley State	F05 - W10	Giancoli	W06 - Halliday to Young/Freedman

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School	Years of Data	Text Used Throughout	Changed Adoptions Once
Howard University	S06 - S10		F08 - Halliday to Ohanian
Illinois Institute of Tech	F06 - S10		F08 - Halliday to Ohanian with Luzader
John Brown University	F05 - S10		F09 - Cummings to Halliday
Johns Hopkins University	F05 - S10	Reese; Halliday; Halliday (H)	F07 - Giancoli to Knight
Kansas State University	F05 - S10	Halliday	S10 - Halliday to Tipler
Mass Institute of Tech	F05 - S10	Young/Freedman	S06- Serway to Young/Freedman
McMaster University	F05 - S10	Knight	F06 - Knight to Serway
Mississippi State University	F05 - S10		S08 - Serway to Young/Freedman
Missouri University of Science & Technology	F05 - S10	Giancoli; Halliday; Young/Freedman	F06 - Fishbane to Young/Freedman
Montana State University	F05 - S10		S08 - Serway to Halliday
New Mexico Institute of Mining & Technology	F05 - S10	Wolfson/Pasachof	F07 - Young/Freedman to Wolfson
North Dakota State	F05 - S10		F07 - Halliday to Tipler
Northern Illinois University	F05 - S10		F07 - Giancoli to Halliday
Oklahoma State University	F05 - s10		F08 - Knight to Wolfson
Penn State - Behrend	F05 - S10		F07 - Halliday to Cummings
Polytechnic University	F05 - F09		F07 - Serway to Wolfson
Princeton University	F05 - S10	Knight	F06 - Tipler to Knight
Rensselaer Polytechnic	F05 - S10	Halliday	S08 - Halliday to Ohanian
Robert Morris University	F08 - S10		S10 - Halliday to Young/Freedman
Rochester Institute of Technology	F05 - S10	Halliday	F06 - Cummings to Halliday
Rose-Hulman Institute of Technology	F05 - S10		F07 - Knight to Young/Freedman
Rowan University	F05 - S10		F09 - Young/Freedman to Halliday
Rutgers University	F05 - S10	Young/Freedman	F07 - Serway to Young/Freedman; F07 - Serway to Halliday
South Dakota State	F05 - S09		F06 - Young/Freedman to Halliday
Southern Methodist	S06 - S10	Serway	F08 - Hecht to Wolfson
Southern Polytechnic State	F07 - S10	Wolfson	S08 - Young/Freedman to Wolfson
St Cloud State University	F05 - S10		F07 - Young/Freedman to Halliday
St. Olaf College	F06 - S10	Hecht; ChabaY	S07 - Serway to Moore
SUNY Buffalo	F05 - S10	Halliday	S06 - Fishbane to Halliday
SUNY Stony Brook	S08 - S10		S09 - Wolfson to Giancoli
Swarthmore College	F06 - S10	Moore	F07 - Wolfson/Pasachof to Wolfson
Tennessee State University	F05 - S10		F06 - Serway to Young/Freedman
Texas A&M-Kingsville	F06 - W10		F07 - Serway to Young/Freedman
Tufts University	F06 - S10		F07 - Tipler to Halliday
Tulane University	F06 - S10		F08 - Knight to Ohanian

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School	Years of Data	Text Used Throughout	Changed Adoptions Once
US Air Force Academy	F07 - S10	Wolfson	F08 - Knight to Wolfson
Univ of Alaska-Anchorage	F05 - S10		F07 - Serway to Halliday
Univ of Alaska-Fairbanks	F05 - S10		F07 - Serway to Halliday
University of British Columbia	F05 - W10	Halliday (H); Young/Freedman	F06 - Giancoli to Knight
University of Calgary	F05 - W10	Knight; Young/Freedman	W08 - Knight to Young/Freedman
University of California-Los Angeles	F05 - S10	Serway (P)	F07 - Giancoli to Young/Freedman
Univ of California-Riverside	W06 - W10	Serway (P)	F08 - Young/Freedman to Serway
University of Chicago	F07 - S10	Knight	F08 - Fishbane to Serway; F08 - Ohanian to Serway
University of Colorado-Denver	F05 - S10		F07 - Knight to Young/Freedman
University of Georgia	F05 - S10		S08 - Serway to Knight
University of Houston	F05 - S10		F07 - Fishbane to Halliday
University of Lethbridge	F05 - S10	Halliday	F09 - Halliday to Young/Freedman
University of Louisville	F05 - S10		F07 - Young/Freedman to Wolfson
University of Maine	F05 - S10		F08 - Young/Freedman to Knight
University of Mass-Amherst	F05 - S10	Knight; Young/Freedman	F06 - Serway to Knight; F09 - Young/Freedman to Fishbane
University of Mass-Boston	F05 - S10		S07 - Wolfson/Pasachof to Wolfson
University of Mass-Dartmouth	F05 - S10	Halliday	S06 - Serway to Halliday
University of Mass-Lowell	S08 - S10		F08 - Fishbane to Giancoli
University of Memphis	F05 - S10	Halliday	F07 - Serway to Halliday
Univ of Michigan-Ann Arbor	F05 - S10	Young/Freedman	F09 - Young/Freedman to Chabay
University of Minnesota	F05 - S10	Serway; Fishbane	F08 - Halliday (H) to Ohanian; F06 - Fishbane to Halliday (H)
Univ of Minnesota-Duluth	F05 - S10		F07 - Young/Freedman to Halliday
University of Mississippi	S06 - S10	Halliday	F07 - Reese to Halliday
Univ of Missouri-Columbia	F05 - S10		F07 - Knight to Young/Freedman
Univ of Missouri-St. Louis	S06 - S10		F09 - Serway to Tipler
Univ of New Hampshire	S06 - S10	Knight	F06 - Halliday to Knight
University of Pittsburgh	F05 - S10		F07 - Young/Freedman to Halliday; F06 - Young/Freedman to Reese
Univ of Southern California	F05 - S10		F07 - Knight to Young/Freedman
Univ of Southern Maine	F07 - S10	Ohanian	S08 - Knight to Ohanian
University of Texas-Austin	F05 - S10		S08 - Giancoli to Ohanian; S07 - Serway to Ohanian; S08 - Halliday (H) to Ohanian; F09 - Halliday to Wolfson

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School	Years of Data	Text Used Throughout	Changed Adoptions Once
University of Waterloo	W06 - W10	Halliday; Knight; Wolfson; Serway	W10 - Halliday to Knight; F09 - Halliday to Wolfson; F09 - Serway to Wolfson
University of Wisconsin-Milwaukee	F05 - S10	Tipler	S06 - Serway (P) to Tipler
University of Wisconsin-Platteville	F05 - F09	Young/Freedman	F08 - Knight to Young/Freedman
Villanova University	F05 - S10	Serway (P); Serway; Resnick; Halliday (H)	F09 - Serway to Giancoli
Washington State University	S06 - S10	Knight	S07 - Serway to Knight
Wayne State University	W06 - S10		F07 - Halliday to Serway
West Virginia Institute of Technology	F05 - F09		W07 - Benson to Wolfson
Widener University	F05 - F09	Knight; Giancoli	S08 - Giancoli to Young/Freedman
Williams College	F06 - S10	Giancoli; Serway	F07 - Giancoli to Serway
Worcester Polytechnic Institute	F05 - S10	Young/Freedman; Halliday	F06 - Fishbane to Halliday; S10 - Young/Freedman to Halliday

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2. Schools that Changed Adoptions during the Period

b. Changed Adoptions More than Once - 94 schools (27%)

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
Arizona State	F05 - S10	Knight; Young/Freedman; Halliday	F06 - Wolfson/Pasachof to Young/Freedman	Young/Freedman to Chabay (S07) to Young/Freedman (S09)
Baylor University	F05 - S10			Giancoli to Young/Freedman (F07) to Giancoli (F09); Fishbane to Serway (S06) to Giancoli (S07)
Boston University	F05 - S10	Fishbane	S09 - Serway to Giancoli	Knight to Serway (F06) to Giancoli (S09) to Knight (F09)
Bradley University	F06 - S10			Reese to Tipler (F07) to Reese (F08) to Serway (S10); Reese to Tipler (F07) to Reese (F08)
Cal State Polytechnic – Pomona	F05 - S10		W08 - Serway to Knight	Serway to Knight (F08) to Chabay (S09) to Knight (F09)
Cal State University- Northridge	F05 - S10	Tipler	F06 - Knight to Halliday	Tipler to Halliday (S07) to Tipler (S09)
Calvin College	S07 - S10	Cummings; Moore		Cummings to Young/Freedman (S08) to Giancoli (F08)
Case Western Reserve	F05 - S10	Halliday; Reese		Halliday to Reese (S06) to Halliday (F06) to Reese (F07) to Young/Freedman (F08) to Ohanian (S09) to Halliday (S10)
Catholic University of America	F05 - S10			Young/Freedman to Ohanian (F08) to Young/Freedman (F09)
Clarion University of Pennsylvania	F05 - S10			Tipler to Reese (F06) to Serway (F08)
Colorado State University	F07 - S10		S10 - Young/Freedman to Tipler	Young/Freedman to Tipler (S08) to Young/Freedman (F08) to Tipler (F09) to Young Freeman (S10)
Concordia University	F05 - W10	Serway		Serway to Reese (F06) to Serway (W07)
Dartmouth College	F05 - W10			Cummings to Young/Freedman (F07) to Giancoli (F08); Tipler to Young/Freedman (F07) to Tipler (F08); Tipler to Giancoli (S09) to Tipler (W10)
Drexel University	F05 - S10	Serway (P); Chabay	W09 - Serway (P) to Young/Freedman	Serway to Serway (P) (W06) to Young/Freedman (F09)
Duke University	F05 - S10	Serway; Tipler; Cummings		Giancoli to Young/Freedman (F07) to Giancoli (F08) to Halliday (S10); Giancoli to Young/Freedman (S08) to Giancoli (F08) to Tipler (F09) to Giancoli (S10)

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
Embry Riddle (Florida)	F05 - S10		S08 - Young/Freedman to Serway (P)	Young/Freedman to Serway (P) (F06) to Young/Freedman (F09)
Fairfield University	F05 - S10		F07 - Halliday to Young/Freedman; F06 - Giancoli to Young/Freedman	Benson to Halliday (S07) to Young/Freedman (S08)
Florida State	F05 - S10			Tipler to Wolfson (F07) to Wolfson/Pasachof (S08) to Wolfson (F08) to Knight (F09) to Wolfson (S10)
Harvard University	F05 - F09	Young/Freedman	F09 - Young/Freedman to Giancoli	Serway to Halliday (F06) to Giancoli (F08)
Idaho State University	F05 - S10		F08 - Knight to Giancoli	Knight to Young/Freedman (S08) to Giancoli (F08)
Indiana University of Pennsylvania	S06 - S10			Knight to Wolfson (S08) to Halliday (F09)
Lehigh University	F06 - S10		F07 - Tipler to Young/Freedman	Knight to Young/Freedman (F07) to Halliday (S08) to Young/Freedman (F09) to Halliday (S10)
Macon State College	S07 - S10			Serway to Young/Freedman (S08) to Serway (F09) to Giancoli (S10)
Marquette University	F07 - S10	Moore	F09 - Halliday to Moore	Cummings to Halliday (F08) to Moore (F09); Serway to Halliday (S08) to Moore (S10)
Mercer University	F05 - W10			Halliday to Fishbane (W08) to Tipler (W10)
Michigan State	F05 - S10	Fishbane; Knight	F07 - Serway to Bauer	Knight to Halliday (F06) to Knight (F07)
Minnesota State – Mankato	F05 - S10		F08 - Young/Freedman to Halliday	Halliday to Young/Freedman (S06) to Halliday (S09)
NJ Institute of Tech	F05 - S10		F07 - Halliday to Serway	Halliday to Serway (F09) to Halliday (S10)
New Mexico State	F05 - S10		F07 - Knight to Young/Freedman	Tipler to Knight (F06) to Young/Freedman (F08)
New York University	F05 - S10		F06 - Giancoli to Young/Freedman; F07 - Young/Freedman to Chabay; F07 - Young/Freedman to Knight; S09 - Young/Freedman to Giancoli	Giancoli to Young/Freedman (F07) to Giancoli (F08)
North Carolina State	S06 - S10	Tipler; Chabay		Halliday to Giancoli (F06) to Young/Freedman (F07) to Wolfson (S08) to Giancoli, Halliday (S09)
Northwestern	F05 - S10	Tipler		Halliday to Ohanian (S08) to Young/Freedman (F09)
Norwich University	S06 - S10		F08 - Serway to Giancoli	Serway to Giancoli (S09) to Serway (S10)
Ohio State University	F05 - S10	Moore		Halliday to Knight (F06) to Halliday (S08)
Ohio University	F05 - S10	Tipler	S08 - Tipler to Knight	Tipler to Knight (S09) to Tipler (F09) to Knight (S10)
Old Dominion	F05 - S10			Young/Freedman to Cummings (F08) to Young/Freedman (S09) to Cummings (F09) to Young/Freedman (S10)

Note: “Halliday” indicates Halliday’s *Fundamentals of Physics* while “Halliday (H)” denotes Honors (Vol 2). “Serway” indicates *Physics for Scientists and Engineers*, While “Serway (P)” denotes Serway’s *Principals*.

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
Oregon State	F05 - S10	Chabay		Giancoli to Young/Freedman (S08) to Knight (W10)
Prairie View A&M	F05 - S10			Serway to Giancoli (F06) to Young/Freedman (F07) to Giancoli (F08); Serway to Young/Freedman (F07) to Giancoli (F08)
Queens University	F05 - W10	Giancoli	F08 - Young/Freedman to Giancoli	Giancoli to Young/Freedman (F07) to Knight (F08)
Santa Clara University	F05 - S10	Giancoli		Giancoli to Young/Freedman (F07) to Giancoli (F08)
Seattle University	F05 - F09		S07 - Giancoli to Halliday; F06 - Knight to Halliday	Giancoli to Knight (F06) to Halliday (F07)
South Dakota School of Mines & Tech	F05 - S10	Halliday; Moore		Halliday to Serway (S08) to Halliday (F08)
Southern Illinois – Carbondale	F05 - S10			Serway to Serway (P) (F07) to Serway (S08); Young/Freedman to Serway (S06) to Serway (P) (F07) to Serway (S08)
Stevens Institute of Technology	F05 - S10	Knight		Giancoli to Knight (S07) to Giancoli (F07); Giancoli to Halliday (S07) to Knight (F07)
Temple University	F06 - S10	Benson	S08 - Halliday to Young/Freedman	Wolfson to Halliday (F08) to Wolfson (S09) to Halliday (S10); Wolfson to Halliday (S09) to Wolfson (F09) to Giancoli (S10)
Tennessee Tech	F06 - S10		F08 - Knight to Wolfson	Knight to Wolfson/Pasachof (F07) to Wolfson (S08)
Texas Tech University	F05 - S10			Knight to Serway (F07) to Giancoli (S10); Knight to Serway (F06) to Giancoli (F08) to Halliday (F09)
University of Akron	F05 - S10			Giancoli to Young/Freedman (F07) to Giancoli (S10)
University of Alberta	F05 - W10	Young/Freedman; Halliday		Young/Freedman to Serway (W08) to Young/Freedman (W09)
University of Arizona	F05 - F09	Young/Freedman	F06 - Halliday to Young/Freedman; F09 - Serway to Young/Freedman	Fishbane to Young/Freedman (S07) to Serway (S08)
University of California-Berkeley	F05 - S10			Giancoli to Young/Freedman (F07) to Giancoli (F08); Knight to Halliday (S07) to Wolfson (F07); Knight to Halliday (S06) to Knight (F06) to Halliday (S07) to Wolfson
University of California-Davis	F05 - S10	Moore		Young/Freedman to Moore (S08) to Young/Freedman (W09)
University of California-San Diego	F05 - S10	Wolfson/Pasachof; Young/Freedman	W07 - Giancoli to Young/Freedman	Giancoli to Young/Freedman (S08) to Giancoli (S09); Wolfson/Pasachof to Knigh (W09) to Wolfson/Pasachof (F09)
University of California-Santa Cruz	F05 - W10			Giancoli to Young/Freedman (F07) to Giancoli (F08); Young/Freedman to Knight (S07) to Wolfson (F08)
University of Central Florida	F05 - S10	Young/Freedman		Serway to Young/Freedman (F09) to Serway (S10); Halliday to Serway (S06) to Young/Freedman (S10)

Note: “Halliday” indicates Halliday’s *Fundamentals of Physics* while “Halliday (H)” denotes Honors (Vol 2). “Serway” indicates *Physics for Scientists and Engineers*, While “Serway (P)” denotes Serway’s *Principals*.

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
University of Cincinnati	F05 - S10	Serway		Serway to Knight (F07) to Serway (F08)
University of Colorado-Boulder	F05 - S10	Knight		Knight to Young/Freedman (S08) to Knight (S09) to Wolfson (S10)
Univ of Colorado-Colorado Springs	F05 - S10		F09 - Tipler to Halliday; S07 - Serway to Tipler	Serway to Tipler (S06) to Halliday (S10)
University of Connecticut	F05 - S10	Young/Freedman	F07 - Giancoli to Wolfson; F07 - Serway to Wolfson; F08 - Serway to Young/Freedman	Serway to Halliday (S08) to Young/Freedman (F08)
University of Delaware	F05 - S10			Serway to Fishbane (F06) to Halliday (F08); Serway to Knight (F06) to Serway (F07) to Knight (S08) to Serway (F08) to Knight (S09) to Serway (F09)
University of Hawaii-Manoa	F05 - S10		F07 - Tipler to Young/Freedman	Tipler to Young/Freedman (F08) to Moore (S09) to Young/Freedman (S10)
University of Iowa	F05 - S10		S06 - Serway to Halliday	Halliday to Serway (S06) to Halliday (F06) to Knight (S09) to Halliday (S10); Halliday to Young/Freedman (F07) to Fishbane (F09) to Halliday (S10); Halliday (H) to Young/Freedman (F06) to Fishbane (F08) to Halliday (H) (F09)
University of Kansas	F05 - S10	Knight	F09 - Halliday to Knight	Giancoli to Knight (S09) to Giancoli (F09); Halliday to Knight (F07) to Halliday (F08)
University of Maryland	F05 - S10	Serway; Knight	F06 - Serway to Knight; F09 - Serway to Tipler	Tipler to Knight (S07) to Tipler (S08) to Giancoli (F08) to Tipler (S09) to Giancoli (F09)
Univ of Maryland-Baltimore County	F05 - S10		F09 - Young/Freedman to Knight	Young/Freedman to Wolfson (F07) to Knight (F08)
University of Miami	F06 - S10	Giancoli	S08 - Young/Freedman to Fishbane	Young/Freedman to Fishbane (S08) to Halliday (S10)
University of Nevada-Las Vegas	F05 - S10	Knight	F06 - Knight to Halliday (H)	Knight to Halliday (H) (S09) to Knight (F09)
University of Nevada-Reno	F05 - S10		F07 - Serway to Young/Freedman	Serway to Young/Freedman (F06) to Serway (F07)
University of New Mexico	F05 - S10			Halliday to Young/Freedman (F06) to Halliday (S08) to Young/Freedman (F09)
Univ of North Carolina-Greensboro	S06 - S10		S08 - Giancoli to Young/Freedman	Giancoli to Young/Freedman (F07) to Giancoli (F08)
University of North Dakota	F05 - S10		F07 - Serway to Halliday	Young/Freedman to Serway (S07) to Halliday (F08)

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
Univ of Notre Dame	F05 - S10	Tipler	F09 - Halliday (H) to Knight	Serway to Halliday (S06) to Serway (F06) to Halliday (F07)
University of Oklahoma	F05 - S10		F06 - Tipler to Reese	Knight to Wolfson (S07) to Knight (F07); Knight to Mazur (S07) to Wolfson (F07) to Knight (S08)
University of Oregon	F05 - S10			Giancoli to Young/Freedman (F07) to Giancoli (F08)
University of Pennsylvania	F05 - S10	Wolfson		Young/Freedman to Ohanian (S07) to Wolfson (F07) to Tipler (F08) to Giancoli (F09); Benson to Young/Freedman (S06) to Halliday (S07); Young/Freedman to Ohanian (S07) to Wolfson (F07) to Tipler (F08) to Halliday (F09)
University of Rochester	S06 - S09	Chabay; Ohanian		Giancoli to Young/Freedman (F07) to Giancoli (F08)
University of San Diego	F05 - S10		S07 - Cummings to Serway (P); F06 - Knight to Serway	Serway to Knight (S06) to Serway (S08); Serway to Knight (S07) to Moore (S09)
Univ of Tennessee-Chattanooga	F05 - S10		F07 - Tipler to Halliday	Giancoli to Young/Freedman (F07) to Giancoli (F08)
Univ of Tennessee-Knoxville	F05 - S10	Young/Freedman; Knight	F09 - Fishbane to Young/Freedman	Giancoli to Young/Freedman (F07) to Giancoli (F08); Serway to Cummings (F07) to Chabay (F08)
University of Texas-Arlington	F05 - S10			Giancoli to Young/Freedman (F07) to Giancoli (F08)
University of Texas-San Antonio	F05 - S10	Young/Freedman		Serway to Reese (S08) to Knight (F09)
University of Toledo	F05 - S10			Halliday to Cummings (S06) to Halliday (S07)
University of Tulsa	F05 - S10			Halliday to Tipler (F07) to Young/Freedman (F08)
University of Vermont	F05 - S10	Halliday (H)		Serway to Ohanian (S08) to Knight (S09)
University of Virginia	F05 - S10		S07 - Knight to Serway	Giancoli to Ohanian (S08) to Giancoli (S09); Tipler to Giancoli (F06) to Young/Freedman (F07) to Giancoli (F08); Knight to Young/Freedman (F07) to Giancoli (F08); Fishbane to Giancoli (F06) to Young/Freedman (F07) to Ohanian (F08) to Giancoli (F09)
University of Washington	F05 - S10		F07 - Knight to Tipler	Giancoli to Knight (S06) to Giancoli (F06) to Moore (S07) to Tipler (W09)
University of Wisconsin-Madison	F05 - S10		S07 - Serway to Knight	Serway to Young/Freedman (F07) to Serway (F08); Tipler to Moore (F07) to Young/Freedman (F09); Halliday to Tipler (F06) to Moore (S08) to Tipler (S09)

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

School Name	Years of Data	Used Text Throughout	Changed Once	Changed Adoptions More than Once in a Course
Vanderbilt University	F05 - S10	Young/Freedman	S07 - Serway (P) to Young/Freedman; F07 Halliday to Young/Freedman	Fishbane to Ohanian (F07) to Halliday (F09)
Virginia Commonwealth	F05 - S10	Knight		Young/Freedman to Knight (F06) to Young/Freedman (S08) to Knight (F08)
Wentworth Institute of Technology	F05 - S10			Giancoli to Halliday (F07) to Giancoli (F08)
Wichita State University	F05 - S10			Knight to Halliday (F06) to Tipler (S09)
Wright State University	F05 - S10	Serway; Tipler	F09 - Serway to Tipler	Tipler to Serway (W06) to Tipler (W10)
Yale University	F06 - S10		S10 - Fishbane to Serway	Halliday to Knight (F07) to Halliday (F09); Wolfson/Pasachof to Fishbane (F07) to Serway (F09)
Youngstown State University	F05 - S10		F07 - Tipler to Knight; S08 - Knight to Serway	Wolfson/Pasachof to Knight (S06) to Serway (S08)

Note: "Halliday" indicates Halliday's *Fundamentals of Physics* while "Halliday (H)" denotes Honors (Vol 2). "Serway" indicates *Physics for Scientists and Engineers*, While "Serway (P)" denotes Serway's *Principals*.

TABLE B1 – CALCULUS-BASED PHYSICS MARKET

**Summary of Adoptions Changes by Author
2005/06 to 2009/2010**

PLEASE NOTE: The following table reflects all the adoption changes in this market that occurred in the TWM schools over the past 5 years. Often there were multiple changes in a single course and often schools changed back to previous adoptions. Each change was tallied below. So if a school changed from Halliday to Knight, and then back to Halliday again, this would be shown as two adoption changes. There were a total of 484 changes, and 56% of the schools changed adoptions.

From \ To	Total From	Benson	Chabay	Cummings	Fishbane	Gaincoli	Halliday	Halliday (H)	Hecht	Knight	Moore	Ohanian	Reese	Serway	Serway (P)	Tipler	Wolfson	Wolfson/Pasa	Young/Freedman	Other
Benson	3						1										1		1	
Chabay	3				1					1									1	
Cummings	14		1			1	6			1					1				4	
Fishbane	19					2	7	1				1		4		1			3	
Giancoli	50						6			7	1	2		2		3	1		28	
Halliday	64			2	1	4				12	3	4	2	7		6	6		17	
Halliday (H)	3									1		2								
Hecht	1																1			
Knight	62		1			4	13	1			1	2		13		3	8	2	13	1
Moore	6					1										2			3	
Ohanian	10					2	2			1				1			1		3	
Reese	9						2			1				3		2			1	
Serway	80			1	1	10	18			14	1	3	2		3	6	3		17	1
Serway (P)	7					1								2		1			3	
Tipler	37					6	6			7	2		4	2			2		8	
Wolfson	15					3	5			4						2		1		
Wolfson/Pasachof	8				1					2							4		1	
Young/Freedman	92		4	2	5	25	12			13	2	5	1	11	1	6	5			
Other	1						1										1		1	
Total To	484	0	6	5	9	59	78	2	0	64	10	19	9	45	5	32	33	3	103	2

Source: TWM Research

TABLE B2 – CALCULUS-BASED PHYSICS MARKET
Brand Loyalty Analysis for Leading Texts/Author Families
Spring 2005 to Spring 2010

Textbook	Total Used Text During Period	Still Using Text at End of Period		Not Using Text at End of Period	
		# of Schools	#	%	#
Young/Freedman	138	92	66.7%	46	33.3%
Halliday	126	98	77.8%	28	22.2%
Serway	115	72	62.6%	43	37.4%
Knight	96	66	68.8%	30	31.2%
Giancoli	60	49	81.7%	11	18.3%
Tipler	50	34	68.0%	16	32.0%
Wolfson	27	21	77.8%	6	22.2%

Source: TWM Research

CALCULUS-BASED PHYSICS MARKET
Giancoli to Young/Freedman to Giancoli Analysis
07/08 to 08/09

We saw a dramatic fall in schools using Giancoli in 07/08 followed by a similar rise in usage the following year. This pattern was reflected in reverse for Young/Freedman. Our analysis revealed 17 schools that dropped Giancoli for Young/Freedman during 07/08 only to re-adopt Giancoli in subsequent terms.

1. Baylor University
2. Duke University
3. New York University
4. North Carolina State University
5. Prairie View A&M
6. Santa Clara University
7. University of Akron
8. University of California – Berkeley
9. University of California – San Diego
10. University of California – Santa Cruz
11. University of North Carolina – Greensboro
12. University of Oregon
13. University of Rochester
14. University of Tennessee – Chattanooga
15. University of Tennessee – Knoxville
16. University of Texas – Arlington
17. University of Virginia

Four additional schools dropped Giancoli for Young/Freedman in 07/08 but did not subsequently return to this adoption.

1. George Mason University
2. Oregon State University
3. University of California – Los Angeles
4. Widener University

APPENDIX A

Schools in TWM Database with Calculus-Based Physics Course Records

Alabama A&M University	Clemson University
Alfred State College	Cleveland State University
Arizona State University	Colorado School of Mines
4. Arkansas State University	Colorado State University
Arkansas Tech University	Columbia University
Auburn University	Columbus State University
Ball State University	Concordia University
Baylor University	Cornell University
Binghamton University	Creighton University
Boise State University	Dalhousie University
Boston College	Dartmouth College
Boston University	DePaul University
Bowling Green State University	Drexel University
Bradley University	Duke University
Brigham Young University	Eastern Kentucky University
Brooklyn College of CUNY	Eastern Michigan University
Brown University	Embry Riddle University (Florida)
Bucknell University	Embry-Riddle Aeronautical University-Prescott
California Institute of Technology	Fairfield University
California Polytechnic State Univ-San Luis Obispo	Fairleigh Dickinson University
California State Polytechnic University-Pomona	Ferris State University
California State University-Chico	Florida Atlantic University
California State University-Dominguez Hills	Florida Institute of Technology
California State University-Fresno	Florida International University
California State University-Fullerton	Florida State University
California State University-Long Beach	Fordham University
California State University-Los Angeles	Gannon University
California State University-Northridge	George Mason University
California State University-Sacramento	George Washington University
California State University-San Bernardino	Georgia Institute of Technology
Calvin College	Georgia Southern University
Carleton College	Georgia State University
Carleton University	Glendale Community College
Carnegie Mellon University	Gonzaga University
Case Western Reserve University	Grambling State University
Catholic University of America	Grand Valley State University
Central Michigan University	Harvard University
Christian Brothers University	Harvey Mudd College
City University of New York-City College	Howard University
Clarion University of Pennsylvania	Hunter College of CUNY
Clarkson University	Idaho State University

Illinois Institute of Technology
Indiana University
Indiana University of Pennsylvania
Indiana University, Purdue University-Indianapolis
Iowa State University
James Madison University
John Brown University
Johns Hopkins University
Kansas State University
Kennesaw State University
Kent State University
Kettering University
Lafayette College
Lamar University
Lawrence Technological University
Lehigh University
Los Angeles Valley College
Louisiana State University
Louisiana Tech University
Loyola Marymount University
Macon State College
Manhattan College
Marquette University
Massachusetts Institute of Technology
McGill University
McMaster University
McNeese State University
Memorial University of Newfoundland
Mercer University
Mesa Community College
Miami University
Michigan State University
Michigan Technological University
Milwaukee School of Engineering
Minnesota State University-Mankato
Mississippi State University
Missouri University of Science & Technology
Montana College of Mineral Science & Technology
Montana State University
Montclair State University
Morgan State University
Naval Postgraduate School
New Jersey Institute of Technology
New Mexico Institute of Mining & Technology
New Mexico State University
New York City College of Technology
New York Institute of Technology
New York University

North Carolina A&T State University
North Carolina State University
North Dakota State University
Northeastern University
Northern Arizona University
Northern Illinois University
Northern Kentucky University
Northwestern University
Norwich University
Nova Southeastern University
Oakland University
Occidental College
Ohio State University
Ohio University
Oklahoma State University
Old Dominion University
Oregon State University
Penn State University
Penn State University-Behrend
Polytechnic University
Portland State University
Prairie View A&M University
Princeton University
Purdue University
Purdue University-Calumet
Queens College of CUNY
Queens University
Rensselaer Polytechnic Institute
Rice University
Robert Morris University
Rochester Institute of Technology
Rose-Hulman Institute of Technology
Rowan University
Rutgers University
Ryerson University
SUNY Albany
SUNY Buffalo
SUNY Stony Brook
Sam Houston State University
San Diego State University
San Francisco State University
San Jose State University
Santa Clara University
Santa Monica College
Scottsdale Community College
Seattle University
South Dakota School of Mines & Technology
South Dakota State University

Southern Illinois University-Carbondale
Southern Methodist University
Southern Polytechnic State University
Southern University
St Cloud State University
St Louis University
St. Olaf College
Stanford University
Stevens Institute of Technology
Swarthmore College
Temple University
Tennessee State University
Tennessee Technological University
Texas A&M University
Texas A&M University-Kingsville
Texas Tech University
The Citadel
Towson University
Tufts University
Tulane University
Tuskegee University
United States Air Force Academy
United States Military Academy
United States Naval Academy
University of Akron
University of Alabama
University of Alabama-Birmingham
University of Alabama-Huntsville
University of Alaska-Anchorage
University of Alaska-Fairbanks
University of Alberta
University of Arizona
University of Arkansas
University of British Columbia
University of Calgary
University of California-Berkeley
University of California-Davis
University of California-Irvine
University of California-Los Angeles
University of California-Riverside
University of California-San Diego
University of California-Santa Barbara
University of California-Santa Cruz
University of Central Florida
University of Chicago
University of Cincinnati
University of Colorado-Boulder
University of Colorado-Colorado Springs

University of Colorado-Denver
University of Connecticut
University of Dayton
University of Delaware
University of Denver
University of Florida
University of Georgia
University of Hartford
University of Hawaii-Manoa
University of Houston
University of Houston-Clear Lake
University of Idaho
University of Illinois at Urbana-Champaign
University of Illinois-Chicago
University of Iowa
University of Kansas
University of Kentucky
University of Lethbridge
University of Louisiana at Lafayette
University of Louisville
University of Maine
University of Manitoba
University of Maryland
University of Maryland-Baltimore County
University of Massachusetts-Amherst
University of Massachusetts-Boston
University of Massachusetts-Dartmouth
University of Massachusetts-Lowell
University of Memphis
University of Miami
University of Michigan-Ann Arbor
University of Michigan-Dearborn
University of Minnesota
University of Minnesota-Duluth
University of Mississippi
University of Missouri-Columbia
University of Missouri-Kansas City
University of Missouri-St. Louis
University of Nebraska-Lincoln
University of Nebraska-Omaha
University of Nevada-Las Vegas
University of Nevada-Reno
University of New Brunswick
University of New Hampshire
University of New Haven
University of New Mexico
University of New Orleans
University of North Carolina at Pembroke

University of North Carolina-Chapel Hill
University of North Carolina-Charlotte
University of North Carolina-Greensboro
University of North Dakota
University of North Florida
University of North Texas
University of Northern Iowa
University of Notre Dame
University of Oklahoma
University of Oregon
University of Pennsylvania
University of Pittsburgh
University of Portland
University of Rhode Island
University of Rochester
University of San Diego
University of Saskatchewan
University of Scranton
University of South Alabama
University of South Carolina
University of South Florida
University of Southern California
University of Southern Maine
University of Southern Mississippi
University of Tennessee-Chattanooga
University of Tennessee-Knoxville
University of Texas-Arlington
University of Texas-Austin
University of Texas-Brownsville
University of Texas-Dallas
University of Texas-El Paso
University of Texas-Pan American
University of Texas-San Antonio
University of Toledo
University of Toronto
University of Tulsa
University of Utah
University of Vermont
University of Virginia
University of Washington
University of Waterloo
University of West Florida
University of Western Ontario
University of Windsor
University of Wisconsin-Madison
University of Wisconsin-Milwaukee
University of Wisconsin-Oshkosh
University of Wisconsin-Platteville

University of Wyoming
University of the Pacific
Utah State University
Utah Valley University
Vanderbilt University
Villanova University
Virginia Commonwealth University
Virginia Polytechnic Institute
Virginia State University
Washington State University
Washington University
Wayne State University
Weber State University
Wentworth Institute of Technology
West Virginia Institute of Technology
West Virginia University
Western Kentucky University
Western Michigan University
Western New England College
Wichita State University
Widener University
Williams College
Worcester Polytechnic Institute
Wright State University
Yale University
Youngstown State University

