



**Quick Fact Summary Number 6
Office of Institutional Effectiveness**

**Investigation of Final Outcomes on Students Obtaining a Grade of D or F,
Withdrawing, Receiving an Incomplete, or Resigning from LSUE.**

April 4, 2018

Acknowledgement

Thanks are given to Dr. John Hamlin, Dean of Sciences and Mathematics, for his original investigation and layout for Tables 1, 2, 4, and 5.

Introduction

The purpose of Quick Fact Summaries is to gather and report data so those requesting information may make effective decisions and update LSUE policy as needed. For number 6, a request was received from members of Academic Council based on a First Year Experience Conference that was attended at the end of March 2018. Specifically, members of Academic Council attending the conference asked about the frequency and rate of a grade of D, F, W (withdrawal), I (incomplete), and R (resignation) as a final grade for “Gateway” courses.¹ Gateway courses are defined in three ways by Koch and Gardner (2017). First, they are typically foundational, lower divisional, and may be developmental. Second, they are high risk as measured by the D, F, W, and I rate where the W is “for any form of withdrawal on the transcript” (Koch and Gardner, p 131). This would include resignations at LSUE since they appear as a W on the student’s transcript. Finally, gateway courses are high-enrollment as measured by the number of students taking the courses across the institution (Koch and Gardner). Lowering the DFWIR rate is a desired institution outcome because it would lead to increased levels of successful completion of coursework and an increased completion of a credential over time. Because the conference data dealt specifically with first-year students, this Quick Fact Summary begins by presenting LSUE data on first-year students only using both first-time freshmen and freshmen returning to LSUE after a period of time. The data included in the tables in this paper reflect student performance from Fall 2013 through Fall 2017 for 5,929 first-year students totaling 10,056 students regardless if the student was located at the main campus in Eunice, online, or at one of the various off-site locations.²

Data on First-Year Students

The data in first few tables contains data on first-year students only as defined above. For example, Table 1 indicates the average number of courses taken by 5,929 first-year

¹ Resignation means that the student withdrew from all courses and had zero hours completed at the conclusion of the semester.

² Data is by academic year – fall and spring only including both eight week accelerated sessions within the fall and spring semesters. This time period was chosen since Modular Mathematics and MATH 1015 (Applied College Algebra) were both implemented in the Fall 2013 semester. The 5,929 first-year students and 10,056 students overall represent unduplicated headcount per semester.

students is 4,865 with a total of 43,785 courses being taken from Fall 2013 through Fall 2017 (see yellow highlighting). Table 1 also denotes a frequency of 12,144 DFWIs with an average of 1,349 per semester. The frequency of resignations for first-year students was, on average, 186 per semester during the given period for a total of 1,675. In all, there were a total of 13,819 DFWIRs from Fall 2013 through Fall 2017, with an average of 1,535 occurring for any given fall or spring semester for first-year students. Next, the frequency of DFWIRs in Table 1 were converted to a percentage so comparisons could be made among the semesters studied. Table 1 indicates that a DFWI is recorded for over one-fourth (27.74%) of the courses taken in any given semester and resignations recorded for 3.83% of the courses totaling 31.56% (see green highlighted). In summary, first-year students received DFWIRs for just under one-third (31.56%) of their courses.

Table 1. Number and Percentage of Course DFWIs Based on Total Number of Courses Taken for the Given Semester for LSUE First-Year Students Only.

Term	Frequency of DFWIR				Percent of DFWIR		
	Number of Courses	Number of Course DFWIs	Number of Course Rs Only	Total Course DFWIRs	Percent DFWIs	Percent Rs Only	Total Percent of DFWIRs
FA 13	5177	1381	202	1583	26.68	3.90	30.58
FA 14	5468	1487	238	1725	27.19	4.35	31.55
FA 15	5197	1336	227	1563	25.71	4.37	30.08
FA 16	5776	1548	208	1756	26.80	3.60	30.40
FA 17	5723	1592	146	1738	27.82	2.55	30.37
SP 14	4024	1095	159	1254	27.21	3.95	31.16
SP 15	3969	1129	136	1265	28.45	3.43	31.87
SP 16	3996	1205	160	1365	30.16	4.00	34.16
SP 17	4455	1371	199	1570	30.77	4.47	35.24
Overall	43785	12144	1675	13819	27.74	3.83	31.56
Mean	4865	1349	186	1535	27.86	3.85	31.71

Next, Table 2 groups data by specific courses taken by first-year students so comparisons may be made to national averages using Koch and Gardner's (2017) data. Again, as with Table 1, the frequency of DFWIs and the frequency of resignations are indicated separately and then added together. The last frequency column shows the overall frequency for the course (i.e. how many time it was taken by first-year students) (see black text). The next set of columns in Table 2 show the frequency data as a percentage (see blue text). The last set of columns shows the national rates based on research by Koch and Gardner (see purple text).

Table 2. High Enrollment First-Year Gateway Courses by <u>DFWIR Rates for LSUE First-Year Students</u> Compared to National Data									
LSUE Course Category	Total Number of D, F, Withdrawals, Incompletes, and Resignations at LSUE				Percent of D, F, Withdrawals, Incompletes, and Resignations at LSUE Based on Outcomes for all Students Enrolled in the Course			National DFWIR Rates According to Koch & Gardner	
	n DFWIs Only	n Rs Only	Total DFWIRs	Overall n	DFWIs	Rs Only	Total	Two-Year	Four-Year
Math-Developmental (MATH 0001, 0002, 0015, 0021)	2097	304	2401	5521	37.98	5.51	43.49	44.00	38.00
Math-College Level (MATH 1015, 1021)	1028	103	1131	2629	39.10	3.92	43.02	42.00	37.00
History (HIST 1001, 1003, 2055, 2057)	597	62	659	1970	30.30	3.15	33.45	36.00	31.00
Biology (BIOL 1001, 1160, 1161, 1201, ZOO 1011, 1012)	1793	159	1952	4545	39.45	3.50	42.95	33.00	28.00
Chemistry (CHEM 1011, 1201)	155	9	164	409	37.90	2.20	40.10	26.00	26.00
Psychology (PSYC 2000, 2070)	703	100	803	2822	24.91	3.54	28.45	31.00	25.00
English-Developmental (ENGL 0001)	487	140	627	2333	20.87	6.00	26.88	43.00	30.00
English-College Level (ENGL 1001)	893	158	1051	3569	25.02	4.43	29.45	33.00	20.00

Table 3. High Enrollment First-Year Biology Courses by <u>DFWIR Rates for LSUE First-Year Students</u> Compared to National Data									
LSUE Course Category	Total Number of D, F, Withdrawals, Incompletes, and Resignations at LSUE				Percent of D, F, Withdrawals, Incompletes, and Resignations at LSUE Based on Outcomes for all Students Enrolled in the Course			National DFWIR Rates According to Koch & Gardner	
	n DFWIs Only	n Rs Only	Total DFWIRs	Overall n	DFWIs	Rs Only	Total	Two-Year	Four-Year
Biology (BIOL 1001, 1160, 1161, 1201, ZOO 1011, 1012)	1793	159	1952	4545	39.45	3.50	42.95	33.00	28.00
BIOL 1161 ³	348	23	371	811	42.91	2.84	45.75		
BIOL 1160 ⁴	349	27	376	848	41.16	3.18	44.34		
BIOL 1001	935	98	1033	2430	38.48	4.03	42.51		
BIOL 1201	161	11	172	456	35.31	2.41	37.72		

³ BIOL 1161 and ZOO 1012 were combined to form a single statistic.

⁴ BIOL 1160 and ZOO 1011 were combined to form a single statistic.

Table 2 indicates that the LSUE first-year DFWIR rates for the groups listed are lower than the national two-year rates provided by Koch and Gardner (2017), even with the resignations included, with three exceptions – college level math, biology, and chemistry (highlighted yellow). The biology data was further broken down by course as shown in Table 3 indicating that BIOL 1161 (Human Anatomy Lab) and BIOL 1160 (Human Anatomy Lecture) lead the DFWIR rate at 46% and 44% respectively. BIOL 1001 (General Biology) follows at 43% with BIOL 1201 (Biology for Science Majors) at 38%. While the results could no doubt be improved, it should be noted that BIOL 1160 (Human Anatomy Lab) and BIOL 1160 (Human Anatomy Lecture) are rigorous courses required for the Allied Health programs.⁵ Data was not broken out by math course because the rate for LSUE first-year students exceeded the national two-year average by one percentage point. The Chemistry data was not provided by course because the faculty member teaching much of the Chemistry courses during the time span studied left LSUE at the conclusion of the Fall 2017 semester.

Data for all LSUE Students

Next, the members of Faculty Council asked about the performance of all students in order to improve success rates across the board for all students. As a result, the data in the previous three tables was repeated for all LSUE students. To begin, the data in Table 4 represents all courses taken by LSUE students at all sites averaging 9,041 courses being per semester for a total of 81,371 courses being taken from Fall 2013 through Fall 2017 (see yellow highlighting). Table 4 also denotes a frequency of 17,788 DFWIs with an average of 1,976 per semester. The frequency of resignations, on average, was 272 per semester during the given period for a total of 2,448. In all, there were at total of 20,236 DFWIRs from Fall 2013 through Fall 2017, with an average of 2,248 occurring for any given fall or spring semester.

Next, the frequencies in Table 4 were converted to a percentage so comparisons could be made among the semesters studied. Table 4 indicates that a DFWI was recorded for 21.86% of the courses taken while resignations made up 3.01% totaling 24.87% (see green highlighted). In summary, one-fourth (24.87%) of all courses taken at LSUE from Fall 2013 through Fall 2017 resulted in a DFWIR.

Next, Table 5 groups data by specifics courses so that comparisons may be made to national averages for first-year students even though the data represents all students attending LSUE. All frequencies (black text), percentages (blue text), and national averages according to Koch and Gardner (2017) (purple text) are shown in a similar fashion to previous tables.⁶

⁵ LSUE Allied Health programs at LSUE include Nursing, Radiologic Technology, Respiratory Care, Surgical Technology, and Diagnostic Medical Sonography.

⁶ Keep in mind that the data presented in purple in Table 5 is for first-year students; however, Academic Council wanted to use it to compare to all LSUE students.

Table 4. Number and Percentage of Course DFWIRs Based on Total Number of Courses Taken for the Given Semester for all Students.

Term	Frequency of DFWIR				Percent of DFWIR		
	Number of Courses	Number of Course DFWIs	Number of Course Rs Only	Total Course DFWIRs	Percent DFWIs	Percent Rs Only	Total Percent of DFWIRs
FA 13	9114	2014	293	2307	22.10	3.21	25.31
FA 14	9289	2091	336	2427	22.51	3.62	26.13
FA 15	8669	1817	312	2129	20.96	3.60	24.56
FA 16	9721	2159	282	2441	22.21	2.90	25.11
FA 17	10248	2281	234	2515	22.26	2.28	24.54
SP 14	8433	1839	213	2052	21.81	2.53	24.33
SP 15	8216	1737	232	1969	21.14	2.82	23.97
SP 16	8288	1796	239	2035	21.67	2.88	24.55
SP 17	9393	2054	307	2361	21.87	3.27	25.14
Overall	81371	17788	2448	20236	21.86	3.01	24.87
Mean	9041	1976	272	2248	21.84	3.01	24.85

Again, Table 5 indicates that the LSUE DFWIR rate for the groups listed are lower than the national two-year rates provided by Koch and Gardner (2017), even with the resignations included. The two exceptions were biology and chemistry (highlighted yellow). The biology data was further broken down by course as shown in Table 6 indicating that BIOL 1161 (Human Anatomy Lab) and BIOL 1160 (Human Anatomy Lecture) lead the DFWIR rate at 44% and 43.5% respectively. BIOL 1001 (General Biology) follows at 40% with BIOL 1201 (Biology for Science Majors) at 37%.

Comparisons

There are a few comparisons worth noting between the first-year data and the overall student body. First, first-year students have a higher DFWIR rate than does the entire student body. Nearly one-third (31.56%) of all courses taken in the student's first year end up with a DFWIR whereas nearly one-fourth (24.87%) of all courses taken end up with a DFWIR (see Table 1 and Table 4). Next, the DFWIR rate for biology and chemistry courses have DFWIR rates above the national average according to Koch and Gardner (2017). It is believed that the chemistry issue will resolve itself as new faculty members have been hired. The biology issue may be difficult to resolve due to the rigor is needed in the courses for Allied Health majors. However, both DFWIR rates, 43% for first-year students and 41% for all students, are quite a bit higher than the 33% for two-year institutions (see Table 2 and Table 5). Data is provided down to the course level to allow Academic Council members to target specific courses, if appropriate (see Table 3 and Table 6).

Note that the reasons for the DFWIRs were not investigated and are beyond the scope of this paper. Regardless, this Quick Fact Summary, Number 5 on the fate analysis of

students receiving Ds or Fs at midterm, and Number 4 on student withdrawals will be presented to Academic Council for their information to determine what can be done to improve success rates and lower the DFWIR rates.

Questions on this Quick Fact Summary may be directed to Dr. Paul Fowler, Director of Institutional Effectiveness and Accreditation Liaison at pfowler@lsue.edu.

References

Koch, A., & Gardner, J. (2017). Transforming the “Real” First-Year Experience. In R. Feldman (Ed.), *The First Year of College: Research, Theory, and Practice on Improving the Student Experience and Increasing Retention* (pp. 126-154). Cambridge: Cambridge University Press. doi:10.1017/9781316811764.006

LSUE Course Category	Total Number of D, F, Withdrawals, Incompletes, and Resignations at LSUE				Percent of D, F, Withdrawals, Incompletes, and Resignations at LSUE Based on Outcomes for all Students Enrolled in the Course			National DFWIR Rates According to Koch & Gardner	
	n DFWIs Only	n Rs Only	Total DFWIRs	Overall n	DFWIs	Rs Only	Total	Two-Year	Four-Year
Math-Developmental (MATH 0001, 0002, 0015, 0021)	2342	341	2683	6246	37.50	5.46	42.96	44.00	38.00
Math-College Level (MATH 1015, 1021)	1502	153	1655	4221	35.58	3.62	39.21	42.00	37.00
History (HIST 1001, 1003, 2055, 2057)	764	80	844	3516	21.73	2.28	24.00	36.00	31.00
Biology (BIOL 1001, 1160, 1161, 1201, ZOOL 1011, 1012)	2583	278	2861	6914	37.36	4.02	41.38	33.00	28.00
Chemistry (CHEM 1011, 1201)	249	13	262	697	35.72	1.87	37.59	26.00	26.00
Psychology (PSYC 2000, 2070)	849	124	973	3911	21.71	3.17	24.88	31.00	25.00
English-Developmental (ENGL 0001)	511	149	660	2467	20.71	6.04	26.75	43.00	30.00
English-College Level (ENGL 1001)	948	194	1142	5132	18.47	3.78	22.25	33.00	20.00

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BIOL 1161 ⁷	613	69	682	1550	39.55	4.45	44.00		
BIOL 1160 ⁸	618	75	693	1595	38.75	4.70	43.45		
BIOL 1001	1115	120	1235	3091	36.07	3.88	39.95		
BIOL 1201	237	14	251	678	34.96	2.06	37.02		

⁷ For the purpose of analysis, BIOL 1161 and ZOOL 1012 data was combined.

⁸ For the purpose of analysis BIOL 1160 and ZOOL 1011 data was combined.