

## **The Journey to Graduation Analysis of Performance of Successful Students at the Faculty of Medicine, King Abdulaziz University - Jeddah**

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*Abstract.* To calculate the time-to-graduate, rate of failing examinations, and the curriculum level at which most failures occur. Records of students graduating during the period from 2001 till 2007 are analyzed as regards to the duration of study and performance in all final examinations. The time till graduation ranged from 6 to 10.5 years (mean = 6.53, SD = 0.8). Only 45.3% of graduating students required 6 years without any failures. Another 12.4% graduated within 6 years, but with failures. 43.2% of the students fail 2 or more final examinations. Most failures occurred at the first year of the curriculum. A lot of students require more than the regular time to graduate. Failure rates are significant. Major review of the curriculum regarding content, methods of instruction and assessment is needed.

*Keywords:* Medical education, Undergraduate students, Time-to-graduate, Performance

### **Introduction**

Although already graduated, most junior house officers spoken to over the past years, do not regard the time as students in the faculty as pleasant. Huge factual burden, too many lectures, and missing the sense of basic science relevance to clinical medicine are often mentioned as reasons for negative experiences. The most unpleasant are thoughts about the repeated assessments.

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The curriculum of the Faculty of Medicine in Jeddah was of the traditional type with complete separation of basic and clinical sciences. Teaching was mainly of lecture format. Tutorials and small group discussions were minimal. Assessment was subject related. In the preclinical years there was a mid-year and a final examination, both of the same formats. Quizzes were frequent during the year, but carried only a small part of the final mark. In the clinical years, there were End of Posting and End of Year examinations, again of the same format with a written and an oral part. The oral examinations were not standardized (except for the OSCE which was introduced in 2003 in the 5<sup>th</sup> year End of Year examination).

The present paper looks at the performance of graduating students in detail and aims at analyzing the academic difficulties students face during their study.

### **Materials and Methods**

Records of all students who graduated during the academic years 1421-1422H till 1427-1428H (2001-2007G) were reviewed. Recorded was the length of study, number of failures in final examinations, curriculum year at which failures occurred, and the frequency of failures in each curriculum year.

### **Results**

One thousand three-hundred and thirty-nine 1339 students (708 males, 631 females) graduated during the study period of 7 years. Only 606 students (45.3%) graduated in the minimum time of 6 years without failing any examination. The required time till graduation ranged from 6 to 10.5 years (mean = 6.53, SD = 0.8). Only 31 students (2.5%) needed more than 9 years to graduate. The frequency of failing final examinations ranged from 0 to 12 (mean = 1.73, SD = 2.19). 162 students (12.1%) failed more than 4 times. Table 1 shows the time required till graduation and in Table 2 the frequency of failing final examinations is listed. Table 3 shows the frequency of failures in each curriculum year. The number of students graduating with and without any failure in every year is shown graphically in Fig. 1.

**Table 1. Duration of study.**

<b>Years</b>	<b>Frequency</b>	<b>Percent</b>
6.0	773	57.7
6.5	173	12.9
7.0	190	14.2
7.5	87	6.5
8.0	40	3.0
8.5	42	3.1
9.0	21	1.6
9.5	6	.4
10.0	4	.3
10.5	3	.2
Total	1339	100.0

**Table 2. Frequency of failures.**

<b>No. of failures</b>	<b>Frequency</b>	<b>Percent</b>
0	606	45.3
1	155	11.6
2	198	14.8
3	123	9.2
4	95	7.1
5	65	4.9
6	43	3.2
7	24	1.8
8	13	1.0
9	9	.7
10	3	.2
11	3	.2
12	2	.1
Total	1339	100.0

**Table 3. Frequency of failures in each curriculum year.**

Curriculum year	Year one	Year two	Year three	Year four	Year five	Year six
No. of failures						
0	868 (64.8%)	1096 (81.9%)	1026 (76.6%)	1060 (79.2%)	1086 (81.1%)	1168 (87.2%)
1	206 (15.4%)	178 (13.3%)	229 (17.1%)	240 (17.9%)	216 (16.1%)	146 (10.9%)
2	247 (18.4%)	56 (4.2%)	72 (5.4%)	29 (2.2%)	28 (2.1%)	22 (1.6%)
3	18 (1.3%)	9 (0.7%)	12 (0.9%)	7 (0.5%)	8 (0.6%)	3 (0.2%)
4	0	0	0	2 (0.1%)	0	0
> 4	0	0	0	1 (0.1%)	1 (0.1%)	0

**Fig. 1. Number of graduating students with and without failing any examination in each year.**

## **Discussion**

The time-to-graduation is an important information for faculty administration and policy makers. As can be seen from Table 1, 42.3% of graduating students need more than the planned 6 years to graduate. This is considered high compared to figures obtained from the literature<sup>[1-5]</sup>.

The obtained results show that more than half of our students fail one or more examinations in the course of their study. Besides being a major psychological stress to students, who were the best of their class at school leaving examination, it is an additional burden on the resources of the faculty, which is being forced to take more students than reasonable for the available facilities. Unfortunately, some colleagues saw in these failures a chance to decrease the already too big number of students.

As can be seen, many failures occur in the first year of curriculum; students study chemistry, physics and biology in addition to English language. The transfer from the rather 'spoon feeding' school teaching to the university level learning must be a major factor in this respect. Another factor is that the students are taught in English. Additionally, the factual burden and low relevance to the medical studies have been repeatedly mentioned. Interestingly, awareness of this point was triggered mainly when relatives of staff members were admitted in good numbers to the study in the faculty. This has triggered repeated discussions at the Faculty Curriculum Committee level and has resulted in major revisions of the first year curriculum.

In year two and three of the curriculum, students learn the medical basic science subjects. As typical for the traditional subject based curriculum, each department decides on the content of its curriculum. As most members of the teaching staff in the basic science departments are non-medical scientists, it is not surprising to again face the problems of factual burden and low relevance to the medical studies.

In the clinical phase of the curriculum, failures are obviously less than before. Factual burden is still a problem. Yet, students' comments relate much more to the problems with assessment. In each subject there are examinations at the end of rotation and at the end of the year, both of the same formats. Each of these examinations has a written and an oral clinical part. Students have to pass the clinical part to be able to progress. Cases for the clinical examination are rather opportunistic and the

examination is not structured. There is no feedback to the students regarding their performance.

Fortunately, the increasing awareness of these factors among staff members within the faculty has stimulated a general discussion in the faculty and has been an important stimulus to the move from the traditional subject based curriculum to the organ-system based curriculum in the year 2006.

In the course of analyzing these results, an interesting point was noticed. There is an increase in the percentage of students graduating without failure over the study period as shown graphically in Fig. 1. Further analysis is needed to see reasons behind it. It would be interesting to find out whether students are working harder or whether the examiners are becoming softer in their judgment.

The curriculum committee needs to put more effort into analyzing the different factors contributing to the 2 aspects of the study (repeated failures and prolonged time-to-graduation). The journey to graduation should become less stressful and more pleasant to think of on the part of our graduates.

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## ملخص بحث الرحلة إلى التخرج، دراسة تحليلية لأداء الطلاب الناجحين بكلية الطب - جامعة الملك عبدالعزيز بجدة

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المستخلص. تم احتساب الوقت اللازم للتخرج، ومعدل مرات الرسوب، والمستوى الدراسي الذي تحدث فيه أغلب حالات الرسوب. بعد مراجعة ملفات المتخرجين من الكلية خلال الأعوام الدراسية ٢٠٠١م وحتى ٢٠٠٧م، واحتساب مدة الدراسة، وأداء الطلاب في الاختبارات النهائية لكل مستوى دراسي. وجد أن فترة الدراسة تتراوح بين ستة سنوات، وعشر سنوات ونصف. (المتوسط: ٦,٥٣ سنة، الإنحراف المعياري ٨,٠). يتخرج ٤٥,٣٪ من الطلاب فقط خلال ستة سنوات بدون رسوب، و ١٢,٤٪ خلال ستة سنوات مع بعض الرسوب. يرسب ٤٣,٢٪ من الطلاب مرتين أو أكثر في الاختبارات السنوية النهائية. أكثر الرسوب يكون في المستوى الدراسي الأول. تحتاج نسبة كبيرة من الطلاب لأكثر من ستة سنوات للتخرج. وتعتبر نسبة الرسوب مرتفعة. هناك حاجة لمراجعة المناهج الدراسية من حيث المحتوى، وطرق التدريس، والتقييم.