Medical Laboratory Science Internship: The Benefits of Mid-term Feedback and Reflection

Dafna Nathan and Ayelet Barenholz

Departments of Medical Laboratory Science and Biotechnology, Hadassah Academic College, Jerusalem



Introduction

Medical Laboratory Science students are required to complete an internship of 320 hours in a medical laboratory (hospital or Healthcare Systems, Kopat Holim).

Many of the students at Hadassah Academic College are young and have had minimal work experience.

In prior years we received complaints regarding the interns, mostly focusing on soft skills and behavioral matters such as: Arriving late, absenteeism, inadequate social skills. Fewer complaints concerned laboratory skills. In the last 5 years approximately ~7% of the interns failed the internship.

Supervisor feedback combined with self-reflection questionnaires were used to improve the student's self-awareness with the goal of reducing both the number of complaints and the failure rate.

Results: Mid term vs. Endpoint overall assessment analysis

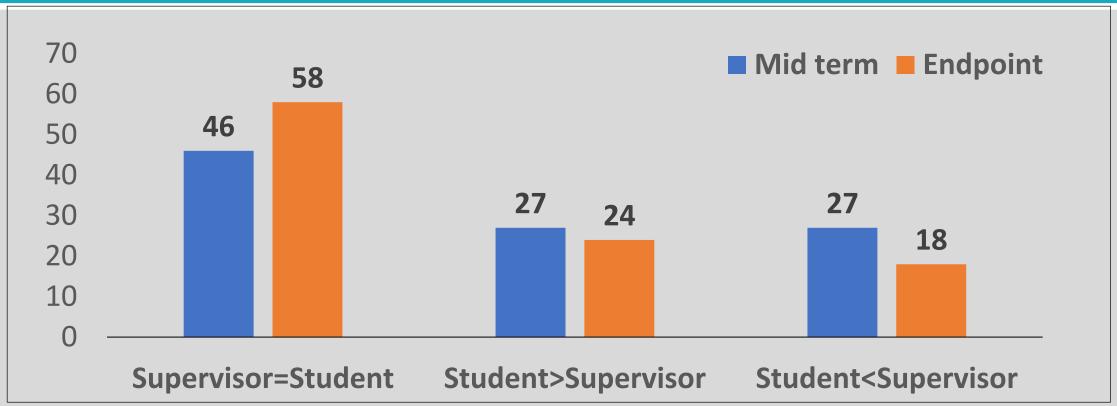


Figure 1: Blue- midterm analysis, Orange- endpoint analysis

Left: Percent of equivalent student supervisor evaluations

Middle: Percent of student over estimators (compared to supervisor)

Right: Percent of student under estimators (compared to supervisor)

Results:

Graduates evaluated the effect of the supervisors' feedback on their current occupation. The majority of graduates report that the supervisors' feedback has a positive impact.

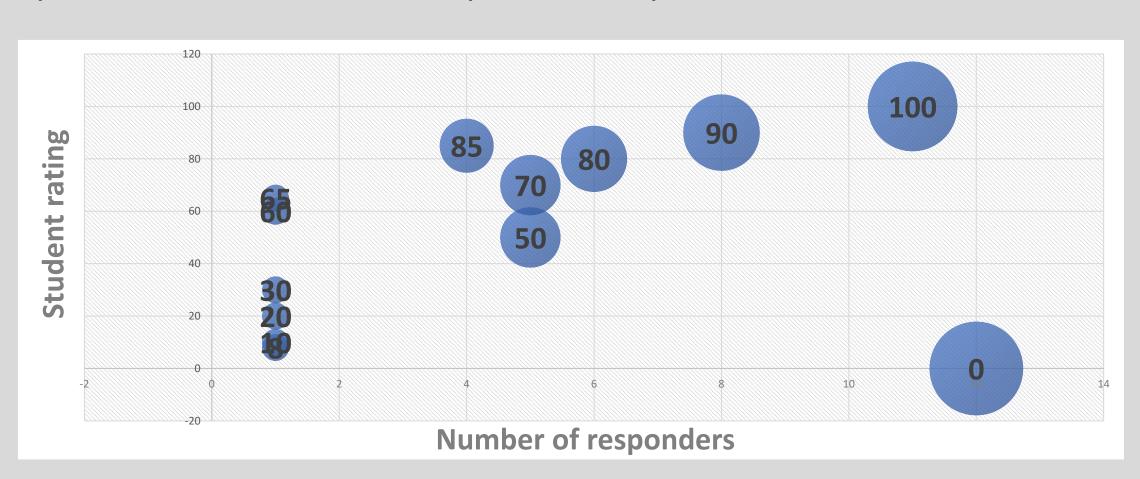


Figure 2: Graduates rating the effect of the supervisors' evaluation on current occupation, scale 0-100% (n=56)

Methods

Supervisors completed a mid-point and end-point evaluation questionnaire.

Students filled in three reflective questionnaires: 1. Two weeks prior to the internship 2. at Mid-point 3. at end-point.

The first (qualitative) questionnaire focused on the student's readiness for the internship: their knowledge of the laboratory field, expected professional conduct, personal characteristics that will help/interfere with their success.

The 2nd and 3rd quantitative questionnaires were identical to the evaluation forms filled by the supervisors.

After the 2nd questionnaires students received feedback containing a summary of the supervisor's review, with "points that require improvement" and "strengths".

When more than 30% of the supervisor's evaluations ranked 3 (out of 5) or below, contact was initiated with both the supervisor and the student.

A Post internship survey was sent to graduates inquiring about occupational status and their perception of the influence of the supervisors' evaluation on their current occupation.

Questionnaires were approved by the college ethics committee. Students and supervisors were asked to sign a consent form to participate in the study.

Results: Hadassah academic college medical laboratory science graduates 2022 - Occupational distribution

56 out of 68 graduates completed the occupational survey.

The results of the survey show that 68 % (n=38) are currently working in medical laboratories

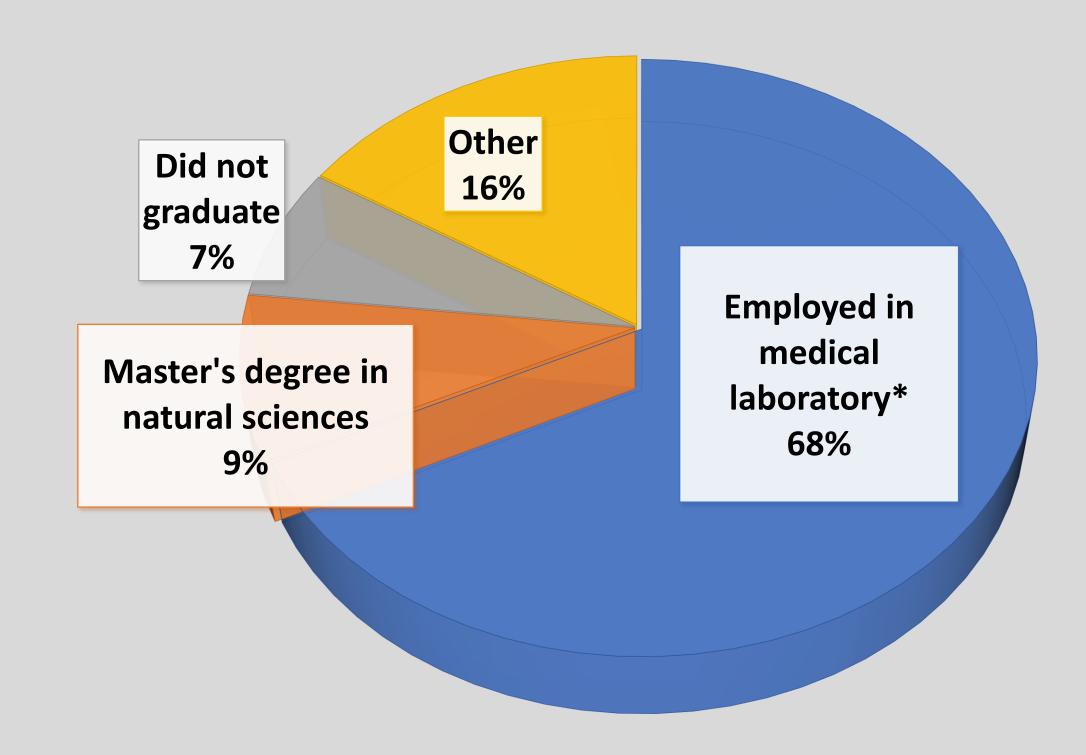


Figure 3: Post internship occupation survey results (n=56).

Summary and Conclusions

This study focuses on usage of supervisor feedback and self reflection to increase the percentage of students who successfully complete the internship and find employment in the field.

Currently, less than 2% of students fail the internship (compared to ~7% previously).

Substantial numbers of graduates found gainful employment: 68% started working in medical laboratories, and 28% of all graduates continued to work in the internship laboratory.

Three patterns of self-assessment were noted: 1. Self-assessment in congruence with the supervisor, 2. Self-under-estimators 3. Self-over-estimators.

The results show that using self and supervisor evaluation mid internship generally improved the endpoint match between the intern and the supervisor and reduced supervisors' complaints compared to previous years. The group of "self-assessment in congruence with the supervisor" grew from 46% to 58%.

We theorize that the group of Self-over estimators experience the most challenges in adapting to the work environment, requiring more interventions. This study suggests that combining supervisor evaluation and students' reflection midterm increases students' adjustment to their future career places and reduces the number of students failing their internship.

References: 1. Khampirat, Buratin & Pop, Carver & Bandaranaike, Sue. (2018). Efficacy of work-integrated learning: Pre and post perceptions among co-operative education students. **2**. Marais, Debbi & Perkins, Joy. (2012). Enhancing Employability Through Self-Assessment. Procedia - Social and Behavioral Sciences. 46. 4356-4362.