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Illeš, Davor; Juričić, Vedran; Alajbeg, Iva; Valentić-Peruzović, Melita

Download date / Datum preuzimanja: **2025-03-30**

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Davor Illeš

Vedran Juričić, Iva Alajbeg, Melita Valentić-Peruzović

School of Dental Medicine, University of Zagreb, Gundulićeva 5, HR-10000 Zagreb

dilles@sfzg.hr

Keywords. Dental education, ICT, Knowledge evaluation

1. Introduction

Gnathology curriculum is one of the integral and compulsory parts of the fifth year educational program at the School of Dental Medicine, University of Zagreb. In this intriguing field students are expected to acquire and develop knowledge based skills about functional anatomy of a healthy stomatognatic system. Additionally they are expected to appreciate the relationships between the morphologic structures and tissues in this system and pathological disturbances that may potentially arise [1-5].

Curriculum includes: teaching seminars – where certain pathological matters are presented and consequently discussed, student's seminars – in which students select a topic with aim to further elaborate it among their colleagues and a clinical skill where students perform clinical procedures on each other.

In order to accomplish these objectives and improve student's knowledge base – a specific IT based educational system was developed and subsequently analyzed. System is composed of: module for managing student seminars, self-evaluation module, written exam module and clinical skill module. Student work is mentored at every step of the educational process. Every module requires adoption of certain skills and is subsequently evaluated.

The gold standard for comparison is the written exam (the total number of points from the written exam). All other evaluation methods should be in concordance with points gathered in this process.

2. Results

Points gathered through education modules were statistically analyzed using Pearson's correlation coefficients. Results are given in Table 1.

Table 1 The values of Pearsons' coefficient higher than 0,1 are consider to be sign of a weak correlation(*), 0,3 are considered to be a moderate level of correlation (**) while values higher than 0,5 represent a strong level of correlation (***).

Correlation pair	Pearson coefficient	Significance
Exam points – Presentation points	0,252*	0,026
Exam points – Mentor points	0,242*	0,033
Exam points – Self grade	0,222*	0,051
Exam points – Clinical skill	0,147*	0,200
Presentation points – Mentor points	0,658***	0,001

Presentation points – Self grade	0,469**	0,001
Presentation points – Clinical skill	0,090	0,432
Mentor points – Self grade	0,451**	0,001
Mentor points – Clinical skill	0,060	0,604
Self grade – Clinical skill	-0,049	0,671

3. Discussion and conclusion

Pearson's correlations were used to determine the strength and direction of the linear relationship between points accumulated through the gold standard (the written exam) and the other evaluation methods. Weak positive relationships were noticed with every single of the other evaluation methods compared to the written exam. Highest correlation coefficient was with the student's presentation points and the lowest with their clinical skills. On the other hand this was somewhat expected and generally preferred. The goal of this area under discussion was to achieve the objective and consistent evaluation. Points gathered through the other evaluation modalities should be positively bind to the gold standard, but the extent and strength of that relationship should be a subject of further and a more comprehensive investigation.

Moderate positive correlation was perceived when examining points from the self-evaluation with presentation compared to the mentor points. That particular result suggests that the student's perception and the teacher's perception of the personal student's knowledge were strongly concordant.

The strongest concurrence was noticed between points given to the student for their presentation and the ones given to them by their mentors. This phenomenon is straightforward to explain since mentors determine the accrued points in accordance with the presented eminence of the student's presentations.

4. References

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