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Evidence-based practice education and programmatic assessment

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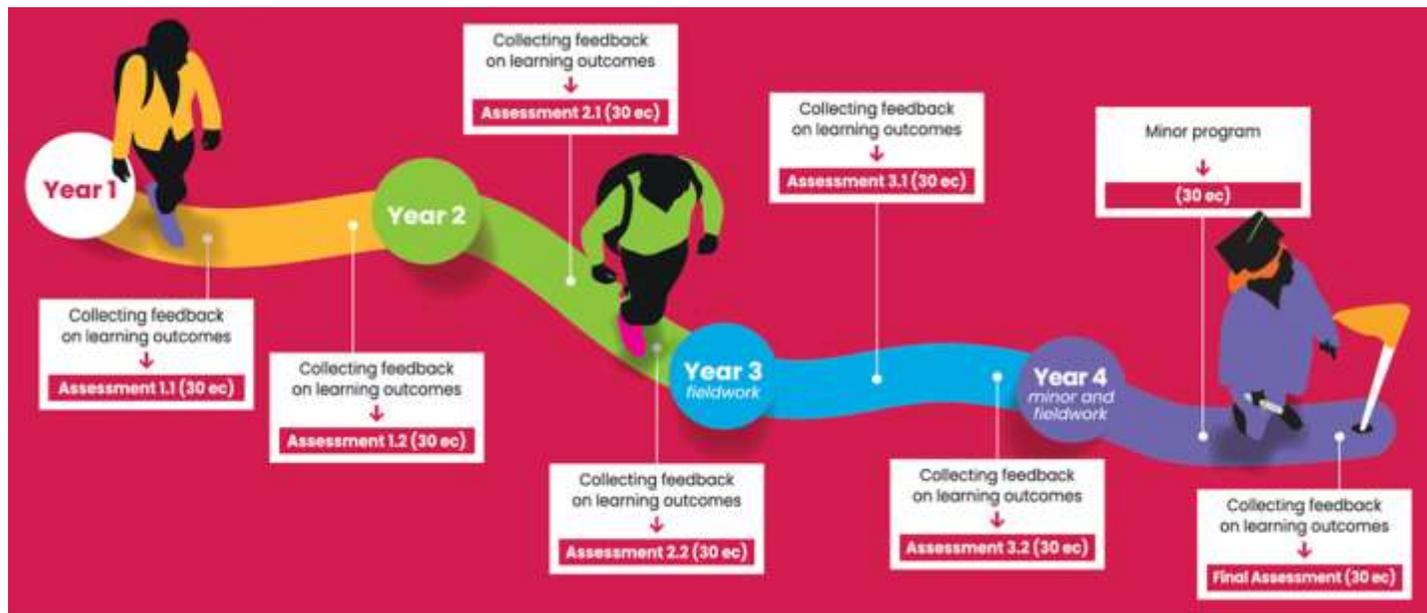
Background

- In 2019, programmatic assessment was implemented in the curriculum of occupational therapy (OT) education in Rotterdam, starting from year 1.
- With the new educational approach, we assume a more inquiring attitude and a more integrated use of evidence-based practice (EBP).
- Also, higher education emphasizes ‘investigative ability’: integration of a research attitude, application of EBP and doing (practice-oriented) research. Therefore, in the new curriculum, not only the method of EBP was implemented but also a research attitude and doing research.



Programmatic assessment in higher education

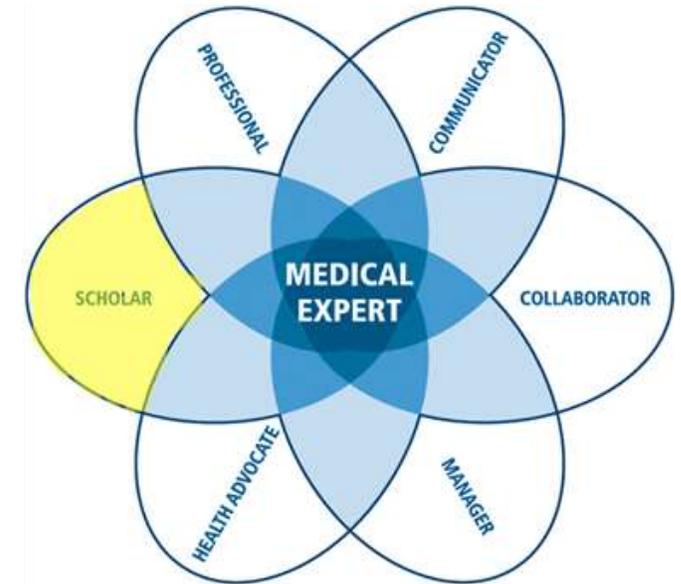
Programmatic assessment is based on a holistic view on assessment: decisions about success or failure are based on multiple performances on different moments and in different situations. Meaningful feedback, feedback dialogue and an iterative process of knowledge acquisition and skill development, in short learning cycles, are essential elements.



Aims

The aim of the present study is to evaluate the level of EBP knowledge and skills and research attitude of OT-students (2nd and 4th-year), after a curriculum change.

Also, the level of EBP knowledge and skills and research attitude of OT lecturers is measured.



Methods



A shortened version of the Dutch Modified Fresno test (DMF) is used, together with a questionnaire on motivational beliefs towards EBP (Spek et al., 2013) and the Research Attitude in Vocational Education (RAVE-Q, Griffioen et al., 2018).



OT students (2nd and 4th-yr) and lecturers completed the questionnaire.



Scores of students are compared with scores of students in the previous curriculum. Differences between groups are tested (Mann-Whitney U) and associations between Fresno scores and scores on motivational beliefs are calculated (Spearman correlation).



Results

- Students: results on Fresno and motivational beliefs in new curriculum show no differences, compared to students of old curriculum;
- No differences in EBP competency between 2nd and 4th yr students;
- Lecturers: significant differences in scores on Fresno (↑) and motivational beliefs (↓) in 2023 as compared with 2013.

Study group		N	Pico (max. 24)	Sources (max. 24)	Searching (max. 24)	Appraisal (max. 72)	Total scores (max. 152)	Motivation	
								Taskvalue	Self-Efficacy
Students 2 nd yr	New curriculum	12	15.0 (3.4)	11.8 (4.6)	19.8 (4.0)	24.4 (8.0)	74.0 (13.2)	43.6 (6.7)	26.8 (10.3)
	Old curriculum	13	18.5 (2.7)	14.4 (5.6)	14.1 (3.5)	19.2 (13.4)	69.2 (12.9)	41.9 (4.1)	29.7 (6.6)
Students 4 th yr	New curriculum	10	15.7 (3.2)	10.9 (2.2)	17.6 (3.6)	25.4 (9.1)	71.2 (13.9)	43.5 (7.2)	23.8 (8.3)
	Old curriculum	30	15.9 (6.1)	16.4 (5.6)	16.8 (5.8)	15.1 (12.5)	68.3 (21.4)	44.9 (5.8)	29.0 (9.7)
Lecturers	2023	19	17.6 (3.2)	17.3 (5.8)	19.2 (3.5)	32.6 (13.6)	91.5 (20.9)*	47.5 (5.7)	18.2 (9.2)**
	2013	18	18.5 (2.8)	10.9 (7.4)	13.3 (10.1)	24.2 (13.7)	70.7 (24.7)	46.0 (9.0)	27.2 (11.1)

Scores are presented in Mean (SD); * p<0.05; ** p<0.01



Results

- No correlation between Fresno scores (EBP) and Motivational beliefs was found in students. In lecturers, total Fresno scores correlated with Self-efficacy.
- In measurements, a strong correlation was found between Motivational beliefs and RAVE-Q Self-efficacy and Perceptions.

Secondary, scores on RAVE-Q show differences in:

- Self-efficacy between 2nd and 4th-yr students;
- Self-efficacy, Cognitive and Affective Attitude, and Intention between lecturers and students.

Research Attitude in Vocational Education Questionnaire (RAVE-Q)	2 nd year students	4 th -year students	Lecturers
Perceptions of research in profession	4.7 (0.50)	4.6 (0.49)	4.6 (0.42)
Cognitive attitude towards research	4.6 (0.48)	4.6 (0.64)	5.0 (0.42)*
Affective attitude towards research (positive)	3.7 (1.06)	3.5 (1.17)	4.6 (0.67)*
Affective attitude towards research (negative)	3.2 (1.17)	3.8 (1.09)	2.1 (0.91)*
Self-efficacy towards research	3.8 (0.56)*	4.4 (0.60)	4.8 (0.89)*
Intent of research behaviour	4.4 (0.52)	4.0 (0.84)	5.0 (0.57)*
Dependency of context for research	4.0 (0.59)	4.1 (0.59)	4.1 (0.59)

Limits

- Results are preliminary due to small samples.
- Results might be biased by small samples, and voluntary participation.
- Rating the Fresno test is complicated; this might affect reliability
- Interpretation of results: criteria for levels of EBP competencies are lacking; and data of other healthcare students are not available yet.



Conclusion



Programmatic assessment is an educational method that matches well with EBP-education, since the focus is on methodological processes and asking questions.



Measuring EBP knowledge, skills and attitudes is useful to evaluate if the (changed) curriculum contributes to competent EBP practitioners.



Based on this evaluation, the feedback dialogue with students in the 3rd and 4th-year can be further tailored to improve EBP and research competency and attitude.



Thank you for your attention!

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