RedFame

Journal of Education and Training Studies
Vol. 13, No. 4; October 2025
ISSN 2324-805X E-ISSN 2324-8068
Published by Redfame Publishing
URL: http://jets.redfame.com

School-based Mentoring - An Analysis of Austrian Mentees on Mentoring Practices in Teacher Education Programmes

Elisabeth Haas

Correspondence: Elisabeth Haas, University College of Teacher Education Vorarlberg, Austria. Email: elisabeth.haas@ph-vorarlberg.ac.at

Received: April 17, 2025 Accepted: July 6, 2025 Online Published: July 7, 2025

doi:10.11114/jets.v13i4.7811 URL: https://doi.org/10.11114/jets.v13i4.7811

Abstract

The study points out the importance of practical mentoring in schools and the mentee's (n=114) assessment of the mentoring process in relation to the five-factor model (MET) according to P. Hudson (2005, 2010) during their internship. The students surveyed (n=114) from an Austrian university college of teacher education were in the second, third or fourth year of a bachelor's degree programme in primary school teaching. The survey took place at the end of their work placement. Highly significant differences between the cohorts (second vs third/fourth year of study) can be documented for all five factors within the mentoring practices, in particular for trust (p=0.002) and paying attention (p=0.008), for supporting reflection (p=0.006), in discussions about goals (p=0.014) and points of view (p=0.009), in supporting teaching strategies (p=0.008), in designing classroom management (p=0.002), in evaluating teaching activities (p=0.006), in providing written feedback (p=0.001) and in articulating expectations (p=0.009). Further significant differences are described in the article. The results with the differences illustrate that person-orientated mentoring takes place into account the number of semesters already completed and focuses on different aspects that promote a learning and development process.

Keywords: mentoring, MET programme, mentoring practices, mentee assessments, teacher education, internship

1. Introduction

In Austria, school-based mentoring is regarded as a professionalisation measure in the two-tier teacher education process. Mentoring processes take place as part of the Pedagogical Practical Studies (PPS) - a part of the teacher education curricula - in the form of practical school components at partner schools of the teacher education colleges and universities. Depending on their tasks, mentors and mentees (students) discuss career-related and professionally relevant structures for successful teaching and a reflective school culture. Phase descriptions and models (three-level model according to Niggli, 2005, 4; ALACT model according to Korthagen, 2005, 49; 4R model according to Logan in Faix et al., 2017) for the design of a possible mentoring process are described in the literature (Graf et al., 2017, 85; Faix et al., 2017; in the implementation field, it allows the randomly formed team an individual and person-specific approach (Ittel et al., 2009) with consideration of different components. Ideally, dialogue-oriented and person-specific school-based mentoring forms the basis of the strategic professionalisation concept on the path to becoming a teacher.

2. Research Design

2.1 Theoretical Framework

This study is based on the five-factor model for mentoring according to P. Hudson (2005, 2010). Based on literature research and empirical studies, the Australian educational scientist developed a model with the five identified factors Personal Attributes, System Requirements, Pedagogical Knowledge, Modelling and Feedback.

The Personal Attributes factor addresses topics such as the mentee's mode of support, introduction to practice, attitude to teaching, ability to listen actively, use of problem-solving strategies and instilling confidence in teaching. The System Requirements factor emphasises the requirements necessary for teaching, such as relevant objectives, guidelines and curricula. The Pedagogical Knowledge factor evaluates mentoring practices on planning, lesson planning, preparation, teaching strategies, content knowledge, problem solving, classroom management, questioning skills, lesson delivery, assessment and viewpoints on teaching. The fourth factor, Modelling, highlights the importance of modelling practices, which include modelling lessons, effective teaching, well-designed lessons, practical teaching, rapport with students, enthusiasm, classroom management and appropriate language of instruction. The feedback factor includes the quality of

feedback and in particular the communication of expectations, the review and discussion of lesson plans, the position of planning and conducting formal observations, the importance of verbal and written feedback and conversations about lesson evaluations.

The five-factor model was presented in various training programmes to further develop mentoring practices. In addition, a questionnaire was designed, the results of which are presented in numerous studies (Carrosa et al., 2019; Day, 2020; James et al., 2020; Ploj Virtič et al., 2021). How Austrian mentors assess their mentoring practices in relation to the five-factor model can be read in the following study: DOI: 10.11114/jets.v10i4.5535 (Haas et al., 2022). In the present study, the mentee's assessment of the mentoring practices found in relation to the five-factor model was surveyed and attention was paid to whether mentees in their second year of study showed differences compared to mentees in their third/fourth year of study.

2.2 Survey Design

The following section describes the design of the questionnaire, explains the research question, breaks down the socio-demographic data of the respondents and presents the data analysis before going on to present the results of the survey.

In addition to collecting socio-demographic data, the questionnaire contains 34 closed questions. It is based on the concept of the five-factor programme developed by P. Hudson (2005, 2010). The 34 items are aligned with five factors: "Personal Attributes", "System Requirements", "Pedagogical Knowledge", "Modelling" and "Feedback".

The central research question is: How do mentees assess mentoring practices according to the five factors "*Personal Attributes", "System Requirements", "Pedagogical Knowledge", "Modelling*" and "*Feedback*" (original scales according to P. Hudson's model)? The internally differentiated question arose from different cohorts in different semesters of the teacher education programme and is explicitly explained in this study: How do statements on mentoring practices of mentees in the second year of study differ from those in the third/fourth year of study in relation to the five-factor model according to P. Hudson (2005, 2010)?

2.3 Sampling Procedures

Students (n=114) on the Bachelor's degree programme in Primary Teacher Education responded to a questionnaire with 34 items at the end of their internship about the mentoring process that had taken place. The items are based on P. Hudson's five-factor model. n=66 students were in their second year of study at the time of the survey, n=37 in their third year and n=11 in their fourth year. The survey summarised the statements of students in the third and fourth years of the Bachelor's degree programme and compared them with the statements of second-year students. Of the n=114 students, n=107 (93.9%) were female, n=7 (6.1%) were male and n=0 (0%) were diverse. In terms of age, the students stated the following: n=1 stated that they were born in 1983, n=18 were born between 1991 and 1997, n=95 (83.4%) stated that they were born between 1998 and 2002. The students (n=66) completed the internship as a practical semester (one-day internship lasting one semester) or as a blocked one-day internship (ten consecutive days) in the third and fourth year of study (n=48). The students taught at different school levels during the internship: n=27 (23.7%) in a first school level, n=22 (19.3%) in a second school level, n=21 (18.4%) in a third school level, n=18 (15.8%) in a fourth school level and n=26 (22.8%) in a multi-level class. 90.4% (n=103) of the mentees testify that the mentoring process was a positive experience.

2.4 Data Analysis

The survey took place after completion of the internship. Second-year students (n=66) completed the assessment at the end of June 2024, third- and fourth-year students (n=48) in mid-March 2024. The mentees (students) surveyed assessed 34 items using a 5-point verbal rating scale (Likert scale) *[original version: 1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree]*. The items refer to experienced mentoring practices. The respondents thus provide feedback on what they have experienced in mentoring and thus also make judgements about the practices of 80 mentors (80 and not 114 mentors due to team formation).

Computer-aided programmes were used to analyse the data. The statements on the items are presented as relative frequencies in per cent of the answers. The Mann-Whitney-U-test was used to calculate the distribution of the frequencies of the answers to the questions in relation to the students' years of study. A statistical significance level of 5 per cent ($p \leq 0.05$) was assumed as the probability of error.

3. Results

The results are presented in tables summarising the five factors of the model according to P. Hudson (2005, 2010) and the significant results in the comparison of statements made by mentees in their second year of study (n=66) with those in their third/fourth year of study (n=48). Primary school teaching students were selected for the study.

3.1 Presentation of the Quantitative Results

The items are given as variable names in English for the respective factors in order to correspond to the original version.

3.1.1 Factor: Personal Attributes

The first factor provides a Table of students' assessments after the mentoring process of the way in which they received feedback from their mentors. Thus, "Personal Attributes" are evaluated. The reliability statistics show a Cronbach's alpha value of 0.853 for the six items on "Personal Attributes".

Table 1. Frequency distribution of the statements (n=114; Msy= 66, Mtfy=48)

Items for the factor "Personal Attributes"	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	P
Supportive						
Mentee second year of study	3,0	4,5	18,2	27,3	47,0	0,069
Mentee third/fourth year of study		10,4	27,1	33,3	29,2	
Comfortable in talking						
Mentee second year of study		1,5	6,1	21,2	71,2	0,113
Mentee third/fourth year of study	2,1	2,1	12,5	25,0	58,3	
Attentive						
Mentee second year of study		3,0	4,5	18,2	74,2	**0,008****
Mentee third/fourth year of study	2,1	2,1	12,5	33,3	50,0	
Instilled confidence						
Mentee second year of study	1,5	4,5	7,6	22,7	63,6	**0,002****
Mentee third/fourth year of study	14,6	8,3	10,4	29,2	37,5	
Instilled positive attitudes						
Mentee second year of study		3,0	6,1	22,7	68,2	0,169
Mentee third/fourth year of study		2,1	14,6	27,1	56,3	
Assisted in reflecting						
Mentee second year of study		1,5	7,6	34,8	56,1	**0,006****
Mentee third/fourth year of study	6,3	2,1	25,0	29,2	37,5	

*significant; **highly significant

The p-values refer to the mean rank according to Mann-Whitney. Likert scale: [*1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree*].

As shown in Table 1, mentees in their second year of study were significantly more likely than mentees in their third/fourth year of study to say that mentors were attentive to them (Attentive; p=0.008). They were also significantly more likely to believe that the mentor instilled confidence in them (Instilled confidence; p=0.002) and supported them in reflecting (Assisted in reflecting; p=0.006). There were no significant differences between the comparison groups for the other items (p>0.05) (Table 1).

The frequency distribution values for the items pleasant conversations (Comfortable in talking; Msy=92.4%, Mtfy=83.3%, p=0.113) and communicating positive attitudes (Instilled positive attitudes; Msy=90.9%, Mtfy=83.4%; p=0.169) show high percentage values in the summary of the scales (4*) agree* and (5) *strongly agree*.

3.1.2 Factor: System Requirements

The next factor focuses on the presentation of the statements on "system requirements" - "systemic requirements". The Cronbach's alpha value for the "System requirements" scale is 0.745 (3 items).

Table 2. Frequency distribution of the statements (n=114; Msy=66, Mtfy=48)

Items for the factor "System Requirements	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	P
Discussed aims						
Mentee second year of study	9,1	6,1	15,2	36,4	33,3	**0,014***
Mentee third/fourth year of study	6,3	25,0	27,1	20,8	20,8	
Outlined curriculum						
Mentee second year of study	10,6	21,2	10,6	22,7	34,8	0,134
Mentee third/fourth year of study	18,8	20,8	18,8	16,7	25,0	
Discussed policies						
Mentee second year of study	4,5	12,1	24,2	30,3	28,8	0,082
Mentee third/fourth year of study	8,3	20,8	20,8	35,4	14,6	

*significant; **highly significant

The p-values refer to the mean rank according to Mann-Whitney. Likert scale: [*1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree*].

Mentees in the second year of study were significantly more likely than mentees in the third/fourth year of study to say that mentors discussed goals with them (Discussed aims; p=0.014). There are no significant values between the comparison groups for the items Outlined curriculum and Discussed policies (p>0.05) (Table 2).

3.1.3 Factor: Pedagogical Knowledge

In the third factor, mentees assess the relationship to "pedagogical knowledge" during their mentoring process. The Cronbach's alpha calculations show a value of 0.917 for the ten items on the "Pedagogical Knowledge" scale.

Table 3. Frequency distribution of the statements (n=114; Msy=66, Mtfy=48)

Items for the factor "Pedagogical Knowledge"	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	p
Guided preparation						
Mentee second year of study	3,0	6,1	18,2	25,8	47,0	0,036
Mentee third/fourth year of study	4,2	10,4	33,3	20,8	31,3	
Assisted with timetabling						
Mentee second year of study	7,6	16,7	18,2	27,3	30,3	0,284
Mentee third/fourth year of study	8,3	14,6	33,3	22,9	20,8	
Assisted with classroom management						
Mentee second year of study	1,5	4,5	15,2	34,8	43,9	0,401
Mentee third/fourth year of study	4,2	16,7	14,6	18,8	45,8	
Assisted with training strategies						
Mentee second year of study	1,5	1,5	12,1	34,8	50,0	**0,008****
Mentee third/fourth year of study	8,3	12,5	20,8	22,9	35,4	
Assisted in planning						
Mentee second year of study	7,6	15,2	21,2	27,3	28,8	0,172
Mentee third/fourth year of study	8,3	16,7	35,4	20,8	18,8	
Discussed implementation						
Mentee second year of study	3,0	7,6	9,1	24,2	56,1	0,439
Mentee third/fourth year of study	4,2	8,3	14,6	22,9	50,0	
Discussed content knowledge						
Mentee second year of study	7,6	6,1	16,7	37,9	31,8	**0,023***
Mentee third/fourth year of study	4,2	18,8	37,5	16,7	22,9	
Discussed questioning techniques						
Mentee second year of study	1,5	4,5	12,1	34,8	47,0	0,098
Mentee third/fourth year of study	8,3	4,2	18,8	33,3	35,4	
Discussed assessment						
Mentee second year of study	10,6	12,1	21,2	19,7	36,4	**0,024***
Mentee third/fourth year of study	14,6	16,7	35,4	16,7	16,7	
Discussed problem solving						
Mentee second year of study	4,5	1,5	13,6	25,8	54,5	**0,033***
Mentee third/fourth year of study	6,3	12,5	16,7	27,1	37,5	
Provided viewpoints						
Mentee second year of study		4,5	9,1	33,3	53,0	**0,009****
Mentee third/fourth year of study	8,3	10,4	16,7	29,2	35,4	

*significant; **highly significant

The p-values refer to the mean rank according to Mann-Whitney. Likert scale: [*1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree*].

More second-year mentees than third/fourth-year mentees found that mentors supported their mentees significantly more often with teaching strategies (Assisted with training strategies; p=0.008) and provided viewpoints (Provided viewpoints; p=0.009). They were also significantly more likely to believe that they discussed subject-specific knowledge (Discussed content knowledge; p=0.023) and forms of assessment with their mentor (Discussed assessment; p=0.024). There is also a significant difference between the comparison groups for the problem-solving item. Mentees in the second year of study are of the opinion that they discussed problem solving with their mentors very frequently (Discussed problem solving; p=0.033).

There were no significant differences (p>0.05) between the comparison groups for the other six test items (Table 3).

3.1.4 Factor: Modelling

The results for the fourth factor show whether "modelling" was perceived by the mentee in the mentoring process. The Cronbach's alpha value is given as 0.874 for the eight items on the "Modelling" scale.

Table 4. Frequency distribution of the statements (n=114; Msy=66, Mtfy=48)

Items for the factor "Modelling"	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	p
Modelled rapport with students						
Mentee second year of study				27,3	72,7	0,434
Mentee third/fourth year of study			10,4	20,8	68,8	
Displayed enthusiasm						
Mentee second year of study			3,0	28,8	68,2	**0,065***
Mentee third/fourth year of study		2,1	12,5	31,3	54,2	
Modelled a well.designed lesson						
Mentee second year of study		3,0	10,6	30,3	56,1	0,161
Mentee third/fourth year of study	2,1	4,2	14,6	35,4	43,8	
Modelled teaching						
Mentee second year of study	4,5	6,1	21,2	33,3	34,8	0,105
Mentee third/fourth year of study	6,3	6,3	29,2	39,6	18,8	
Modelled classroom management						
Mentee second year of study	1,5		7,6	19,7	71,2	**0,002****
Mentee third/fourth year of study	4,2	4,2	14,6	33,3	43,8	
Modelled effective teaching						
Mentee second year of study		1,5	6,1	31,8	60,6	**0,025***
Mentee third/fourth year of study	2,1		12,5	45,8	39,6	
Demonstrated hands-on						
Mentee second year of study		6,1	7,6	22,7	63,6	**0,044***
Mentee third/fourth year of study		2,1	16,7	39,6	41,7	
Used syllabus language						
Mentee second year of study			7,6	33,3	59,1	0,137
Mentee third/fourth year of study		4,2	8,3	41,7	45,8	

*significant; **highly significant

The p-values refer to the mean rank according to Mann-Whitney. Likert scale: [*1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree*].

Mentees in the second year of study were significantly more likely than those in the third/fourth year of study to state that their mentors showed enthusiasm (Displayed enthusiasm; p=0.065) and demonstrated practical relevance (Demonstrated hands-on; p=0.044). When asked about the design of classroom management (Modelled classroom management; p=0.002) and the design of effective teaching (Modelled effective teaching; p=0.025), mentees in their second year of study were significantly more likely to indicate that these mentoring placements were discussed with their mentors. For the other four test items, there were no significant differences (p>0.05) between mentees in their second and third/fourth year of study (Table 4).

3.1.5 Factor: Feedback

The fifth factor addresses the assessment of practices relating to "feedback" and thus refers to an important "cultural area" in mentoring. The reliability statistics show a Cronbach's alpha value of 0.809 for the six items on "feedback".

Table 5. Frequency distribution of the statements (n=114; Msy=66, Mtfy=48)

Items for the factor "Feedback	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	p
Observed teaching for feedback						
Mentee second year of study	1,5	1,5	10,6	18,2	68,2	**0,044***
Mentee third/fourth year of study	4,2	6,3	12,5	27,1	50,0	
Provided oral feedback						
Mentee second year of study			4,5	24,2	71,2	**0,014***
Mentee third/fourth year of study	4,2	2,1	20,8	18,8	54,2	
Reviewed lesson plans						
Mentee second year of study	6,1	6,1	27,3	28,8	31,8	0,558
Mentee third/fourth year of study	18,8	10,4	14,6	18,8	37,5	
Provided evaluation on teaching						
Mentee second year of study	3,0	3,0	6,1	30,3	57,6	**0,006****
Mentee third/fourth year of study	6,3	4,2	29,2	22,9	37,5	
Provided written feedback						
Mentee second year of study	18,2	16,7	12,1	15,2	37,9	**0,001****
Mentee third/fourth year of study	37,5	27,1	8,3	12,5	14,6	
Articulated expectations						
Mentee second year of study	1,5	3,0	9,1	40,9	45,5	**0,009****
Mentee third/fourth year of study	8,3	8,3	22,9	29,2	31,3	

*significant; **highly significant

The p-values refer to the mean rank according to Mann-Whitney. Likert scale: [*1=Strongly Disagree, 2=Disagree, 3=Uncertain, 4=Agree, 5=Strongly Agree*].

With regard to the "feedback" factor, there are a total of five of the six items with significant differences between the comparison groups. Mentees in the second year of study received oral feedback (provided oral feedback; p=0.014) and written feedback (provided written feedback; p=0.001) significantly more frequently than mentees in the third/fourth year of study. Similarly, the first cohort group is more likely to believe that teaching was observed in order to provide feedback (Observed teaching for feedback; p=0.044) or to provide feedback on the evaluation of teaching (Provided evaluation on teaching; p=0.006). Mentees in their second year of study also stated more frequently compared to mentees in their third/fourth year of study that their mentors articulated expectations (Articulated expectations; p=0.009). There was no significant difference for the item Reviewed lesson plans (p=0.558) (Table 5).

4. Discussion and Interpretation

This study investigated how mentees assess mentoring practices according to the five factors "Personal Attributes", "System Requirements", "Pedagogical Knowledge"; "Modelling", "Feedback" (original scales according to P. Hudson's model) and whether there are differences in the statements on mentoring practices of mentees in their second and third/fourth year of study in relation to the five-factor model according to P. Hudson (2005, 2010)?

The mentees surveyed (n=114) were generally positive about the implementation of mentoring practices (90.4% positive agreement) when the items of the five factors were analysed for the agreement values 4=Agree, 5=Strongly Agree. It can therefore be interpreted that mentees recognise mentoring with on-site reflection processes at schools as a valuable area of experience within teacher education and that a transfer motivation (Lipowsky, 2014) arises. The international research discourse on mentoring shows that the quality of mentoring is crucial for learning gains (Gröschner et al., 2012, 172; Hobson et al., 2009, 212; Mena et al., 2017, 47; Haas, 2021). It can be assumed that positive effects can be expected in terms of social and personal support (Symeonidis et al., 2022), consideration of the mentee's learning needs, free use of testing rooms and the organisation of meetings that are effective for learning (Hobson et al., 2009, 212).

In the present study, assessments of mentees in their second year of study (n=66) and mentees in their third/fourth year of study (n=48) within the mentoring process were shown and compared. Highly significant and significant differences in identified sub-practices of the respective factor within the five-factor model according to P. Hudson (2005, 2010) allow the interpretation that, in the perception of the mentee, mentors organise person-oriented mentoring and that this can be regarded as the core result of the study. Based on the differences identified in this study, it can be assumed that students in lower semesters (second year of study) recognise that mentors systematically introduce mentees to the testing and action field of school and provide them with differentiated feedback on teaching strategies, reflection skills, classroom management, effective teaching, profession-specific knowledge and patterns of expectation at the function-related level. Mentees therefore perceive that mentors cultivate a differentiated application logic in the

mentoring and feedback mode on the aspects of personal-emotional sensitivity, systemic-organisational quality management and reflective-analytical consideration. Reference can also be made to this research result in the study by Schatz-Oppenheimer et al. (2023). They summarised that, in the mentors' view, the three components personal-emotional, didactic knowledge and systemic-organisational belong to the "mentoring profession" (Schatz-Oppenheimer et al., 2023).

The findings relating to the three aspects mentioned above are assigned below to the factors of the five-factor model and linked to the results of this study:

Aspect Personal Emotional Sensitivity ("Personal Attributes" factor): This aspect takes into account how mentees rate their mentors on the Personal Attributes factor and suggest that they are sensitive. Mentees in their second year of study perceive that their mentors are particularly attentive to them (item Attentive) and support them with confidence (item Instilled confidence; item Assisted in reflecting) compared to those in their third/fourth year of study. Similar studies show that when their mentee is inexperienced, mentors both take into account the emotional component in the mentoring process and engage in emotional mentoring (Elshaw et al., 2018; Hudson et al., 2016; Schatz-Oppenheimer et al., 2023) and recognise for themselves as mentors that they act more effectively and meaningfully in the mentoring process when this component is taken into account (Hudson et al., 2018).

Aspect Systemic-organisational quality management (factors "System Requirements", "Pedagogical Knowledge"; "Modelling"): Three factors of the model are summarised within the second aspect. This aspect combines the logics and routines of practical school implementation strategies and career-related fields of action in the school system and, through the mentee's self-assessment, reveals how they judge mentors in this execution of the activity. Mentees in the second year of study, compared to those in the third/fourth year of study, state that they discuss goals more often (Discussed aims), find support with teaching strategies (Assisted with training strategies), have a discourse on subject-specific knowledge (Discussed content knowledge) and forms of assessment (Discussed assessment) in the mentoring process, discuss problem solving (Discussed problem solving) and receive feedback on classroom management (Modelled classroom management) and the design of effective teaching (Modelled effective teaching). The second-year study group also emphasises that mentors show enthusiasm (Displayed enthusiasm) and demonstrate practical relevance (Demonstrated hands-on). Through the results presented here, it can be interpreted that mentors take on their role as mentor/teacher educator/system facilitator responsibly and pay attention to the learning and development process by responding to the needs of students with less educational experience. Critically, it can be noted that the tightrope walk towards master teaching (Kraler et al., 2023) and encouraging the adoption of structures and regularities could quickly return. This requires a reflective view on the part of the mentor and coherent strategies in the sense of a theory-practice-research link between the training institutions (Fraefel, 2018, 43).

Aspect Reflective-analytical observation ("feedback" factor): The third aspect provides insight into the mentors' reflection habits within the mentoring practices. Mentees in the second year of study receive more oral feedback (Provided oral feedback) and written feedback (Provided written feedback) than those in the third/fourth year of study, expectations are expressed in the mentoring process (Articulated expectations) and evaluations on teaching are provided (Provided evaluation on teaching). Ideally, mentors pursue a model of reflection with a culture of guidance on problem-solving with personal responsibility (GROW model by Whitemore in Faix et al., 2017) and goal-setting (Schuy, 2019).

The concept of the "The Level Model" according to Niggli (2005) with the different orientations of conversation content: feedback conversation as the level of working, reflective practice conversation as the level of recognising, coaching conversation about the person as the level of being oneself (Niggli, 2005, 4) would come closest to considering the three aspects mentioned. Regardless of how mentoring takes place in the team today, it can be asserted: "The claim to mentoring today is based on the concept of a symmetrical relationship, regardless of the different competences, experiences and knowledge of those directly involved." (Kraler et al., 2023, 538) This assumption can also be made in this study, especially as the organisation of the internships by the institution favours a "one-on-one" mentoring model (Crasborn et al., 2011; Hobson et al., 2009) and thus personal and individual mentoring.

The strengths of the present study are the application of a validated model in the field of teacher education from Australia and the fact that all mentors can demonstrate training within the framework of a university programme (to the extent of 8, 15 or 30 ECTS credits). The five-factor model focuses on latent core areas of mentoring practices (Smith et al., 2016) and was conducted for the first time in Austria. However, some limitations of the study must be recognised. For example, the number of participants must be mentioned. In order to confirm the results, further studies need to be conducted. Self-assessment can also be considered as a bias and possible limitation. Answers from the mentors or a comparison of the answers from mentees and mentors could provide important additional knowledge about the significance of mentoring practices in a future study. Another limitation is that there were differences in the organisation

of the internships in both groups. Second-year students came to the mentor's class once a week for an entire semester, while third/fourth-year students completed a blocked daily internship lasting ten days. The duration of the meeting times was also not recorded. A time of 50 minutes per school day is mandatory - as this is relevant for financial accounting purposes. As already mentioned, the mentors underwent a qualification programme. During this programme, they have experienced different forms of feedback cultures. The mentor does not necessarily have to apply and carry out all of the proposed mentoring practices. This could also be taken into account in the interpretation. It can also be assumed that the mentors used belong to the group of highly motivated teachers or mentors and thus represent an optimum.

This study focused on recording differences in students' perceptions of supervision activities during the completion of internships on the primary school teacher education programme using a programme based on Hudson's five-factor model (2005, 2010).

It can be shown that mentees perceive supportive measures through the school-based mentoring process and that students with lower semesters experience the different mentoring practices of their mentors particularly intensively. Becoming aware of supportive moments and situations of experience in the complex professional field of school can contribute to mentees internalising practices and gaining confidence in their actions. Conversely, it can be stated that mentors gradually and cautiously take up practices related to the practical school activities of their mentees on the learning and teaching side - ideally in the sense of a professionalisation concept. Although the mentors' data on the implementation of their strategies is missing in this study, it can be assumed that the experienced teachers implement the areas of responsibility in the mentor function with professionalism and sensitivity and that they are aware of the importance of successful mentoring. Person-orientated mentoring in a benevolent atmosphere harbours the power of potential development and allows mentees to arrive successfully in the school system. School-based mentoring with the key questions: "What did you do well in the practical implementation? What would you do differently next time, and why?" are assigned to research-based learning and contribute to the process of gaining knowledge and the learning process (Gold et al. 2017; Schüssler et al. 2017; Hermann et al., 2018). Vonk (1995) commented: "...meaningful learning from experience will only take place when a beginner reflects on those experiences; i.e. analyses and understands teaching situations and so develops a feeling about what actions are effective in these situations and why some actions are effective and others not." (Vonk, 1995, 2) Accordingly, it can be said: "School-based mentoring is to be understood as a profession-specific learning and development process that (...) aims to develop professional and self-efficacy." (Haas 2021, 236) This study makes a contribution to the fact that person-orientated mentoring takes place in teacher education and that school-based mentoring can be viewed with different factors and theory-based concepts.

Acknowledgments

I would like to thank Peter Hudson for providing me with the MET program materials. This made the study possible in Austria.

Authors contributions

Elisabeth Haas conducted the study single-handedly and evaluated the results.

Funding

Competing interests

The author declares that she has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Redfame Publishing.

The journal’s policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

References

Carrosa, C. V., Rosas-Maldonado, M., & Martin, A. (2019). Novice EFL teacher perceptions on their past mentoring experience/percepciones de profesores novatos de inglés como segundo idioma sobre sus procesos de mentoría. *Educación, 43*(2). https://doi.org/10.15517/revedu.v43i2.34178

Crasborn, F. J., Hennissen, P. P., Brouwer, N., Korthagen, F. A., & Bergen, T. (2011). Exploring a two-dimensional model of mentor teacher roles in mentoring dialogues. *Teaching and Teacher Education, 27*(2). https://doi.org/10.1016/j.tate.2010.08.014

Day, S. P. (2020). Beginning science teachers' expectations of their mentors. *Mentoring Science Teachers in the Secondary School Routledge,* 32-46. https://doi.org/10.4324/9780429400308-5

Elshaw, J., Fass, D., & Mauntel, M. B. (2018). Cognitive mentorship: Protégé behaviour as a mediator to performance. *Mentoring and Tutoring: Partnership in Learning, 31*(3), 421-440. https://doi.org/10.1080/13611267.2018.1511951

Faix, T., & Wiedekind, A. (2017). *Mentoring. The practice book.* Holistic accompaniment of faith and life. Neukirchen-Vluyn: Neukirchner Verlagsgesellschaft.

Fraefel, U. (2018). The turn to collaborative mentoring in school internships. Table of empirical findings, theoretical localisations and strategies of transformation. In Reintjes, Ch., Bellenberg, G. & Brahm, G. (2018). *Mentoring and coaching as a contribution to the professionalisation of prospective teachers.* Münster, New York: Waxmann Verlag. 41-66.

Gröschner, A., & Seidel, T. (2012): Learning support in the internship - findings and innovations in the context of teacher education reform. In W. Schubarth, K. Speck, A. Seidel, C. Gottmann, C. Kamm & M. Krohn (Eds.). *Studying after Bologna: Strengthening practical relevance?!* Wiesbaden: Springer, 171-183. https://doi.org/10.1007/978-3-531-19122-5_9

Gold, J., & Klewin, G. (2017). Empirical research methods in student research projects. In Schüssler, R., Schönring, A., Schwier, V., Schicht, S., Gold, J., & Weyland, U. (Eds.) (2017). Research-based learning in the practical semester. Approaches, experiences, concepts. Bad Heilbrunn: Klinkhardt Verlag, 147-160.

Haas, E. (2021). *Mentoring processes in teacher education. Successful conditions for school internships.* Bad Heilbrunn: Klinkhardt publishing house.

Haas, E., Hudson, P., & Hudson, S. (2022). Mentoring for Effective Teaching - An Analysis of Austrian Teachers' School-based Mentoring Practices. *Journal of Education and Training Studies.* https://doi.org/10.11114/jets.v10i4.5535

Herzmann, P., & Liegmann, A. B. (2018). Study projects in the practical semester. Impact research in the context of research-based learning. In Rothland, M. & Schaper, N. (2018). *Teacher education on the test bench, 1*1(1), 46-65. Landau: Publishing house Empirical Pedagogy.

Hobson, A. J., Ashby, P., Malderez, A., & Tomlinson, P. D. (2009): Mentoring beginning teachers: What we know and what we don't. *Teaching and Teacher Education, 25*(1), 207-216. https://doi.org/10.1016/j.tate.2008.09.001

Hudson, P., Skamp, K., & Brooks, L. (2005). Development of an instrument: Mentoring for effective primary science teaching. *Science Education, 89*(4). 657-674. https://doi.org/10.1002/sce.20025

Hudson, P. (2010). Mentors report on their own mentoring practices. *Australian Journal of Teacher Education. 35*(7), 30-42. https://doi.org/10.14221/ajte.2010v35n7.3

Hudson, P., & Hudson, S. (2016). Mentoring beginning teachers and goal setting. *Australian Journal of Teacher Education, 41*(10), 47-61. https://doi.org/10.14221/ajte.2016v41n10.4

Hudson, P., & Hudson, S. (2018). Mentoring preservice teachers: identifying tensions and possible resolutions. *Teacher Development, 22*(1), 16-30. https://doi.org/10.1080/13664530.2017.1298535

Ittel, A., & Raufelder, D. (2009). Mentoring in schools: Professional practice and quality assurance. In H. Stöger, A. Ziegler & D. Schimke (Eds.). *Mentoring: Theoretical backgrounds, empirical findings and practical applications.* Lengerich. 193-206.

James, S., Hudson, S., & Lasczik, L. (2020). Secondary preservice teachers' perspectives of their literacy mentoring experiences during professional placement. *International Journal of Social Policy and Education, 2*(7), 59-70. https://doi.org/10.1108/IJMCE-07-2021-0080

Korthagen, F. A. J., & Vasalos, A. (2005). Levels in reflection: core reflection as a means to enhance professional growth. Journal Teachers and Teaching. *Theory and practice, 11*(1), 47-71. https://doi.org/10.1080/1354060042000337093

Kraler, C., Dammerer, J., Haas, E., Schreiner, C., & Wiesner, C. (2023). Professionalisation through mentoring and mentor training. In Education and teaching. *The career entry of teachers,* 7-8, ÖBV, 537-546.

Lipowsky, F. (2014). Theoretical perspectives and empirical findings on the effectiveness of teacher education and further education. In E. Terhart, H. Bennewitz &. M. Rothland (Eds.). *Handbook of research on the teaching profession.* 2nd revised edition. Münster: Waxmann, 511-541.

Mena, J., Hennissen, P., & Loughran, J. (2017). Developing pre-service teachers' professional knowledge of teaching: The influence of mentoring. *Teaching and Teacher Education, 66*(8), 47-59. https://doi.org/10.1016/j.tate.2017.03.024

Niggli, A. (2005). *Lesson discussions in mentoring.* Oberentfelden: Sauerländer.

Ploj Virtič, M., Du Plessis, A., & Šorgo, A. (2021). In the search for the ideal mentor by applying the 'Mentoring for effective teaching practice instrument'. *European Journal of Teacher Education,* 1-19. https://doi.org/10.26529/cepsj.1315

Schatz-Oppenheimer, O., & Goldenberg, J. (2023). The impact of professional mentoring on mentors of novice-teachers. *International Journal of Mentoring and Coaching in Education,* 1-20. https://doi.org/10.1108/IJMCE-08-2022-0070

Schuy, R. (2019). https://clevermemo.com/blog/grow-modell/ (2019-05-26).

Schüssler, R., & Schönring, A. (2017). Research-based learning in the practical semester - potential and design options. In Schüssler, R., Schönring, A., Schwier, V., Schicht, S., Gold, J., & Weyland, U. (Eds.) (2017). Research-based learning in the practical semester. Approaches, experiences, concepts. Bad Heilbrunn: Klinkhardt Verlag. 35-50.

Smith, J., & Nadelson, L. (2016). Learning for you and learning for me: mentoring as a professional development for mentor teachers. *Mentoring and Tutoring, 24*(1), 59-72. https://doi.org/10.1080/13611267.2016.1165489

Symeonidis, V., Haas, E., & Schneider, K. (2022). Personal, social and professional support for newly qualified teachers: Teacher induction in Austria. *Teaching and Teacher Education*. https://doi.org/10.1016/j.tate.2022.103916

Vonk, J. H. C. (1995). *Conceptualising no' ice teachers' professional development - A base for supervisory interventions.* Paper presented at the annual meeting of the American Educational Research Association. San Francisco.