

PERFORMANCE-BASED COMPETENCY REQUIREMENTS FOR STUDENT TEACHERS: A VALIDATION STUDY

Pihel Hunt¹, Äli Leijen¹, Liina Malva¹, Bert Slof², Marieke van der Schaaf²

¹ University of Tartu (ESTONIA)

² Utrecht University (THE NETHERLANDS)

Abstract

This paper reports a validation study of the performance-based competency requirements model for initial teacher education. An assessment rubric of student teachers' performance-based competency requirements was developed in collaboration between Dutch and Estonian researchers and teacher educators. For the validation of the rubric in Estonia, a Delphi method was implemented. Eleven teacher education experts were asked to assess and comment on the model in three rounds. This resulted in a high degree of consensus and support for the assessment rubric, involving five professional roles, twelve professional activities and five performance levels for each activity. The contribution of this study is an identified and formulated set of roles, professional activities and performance levels that can serve as an assessment model for performance-based teacher education in Estonia and that can be considered for other contexts.

Keywords: Delphi study, workplace-based learning, initial teacher education, entrusted professional activities, rubric assessment.

1 INTRODUCTION

The quality of education highly depends on what teachers do (the teaching tasks they perform) and on their competences to adequately fulfil these tasks ([1]). For this reason, performance-based educational models have gained considerable attention in teacher education in recent decades. Overall, feedback on and assessment of activities are critical for developing professional expertise and are the most powerful sources for professional learning in the workplace ([2], [3]), which constitutes a significant part of contemporary teacher education in many countries. However, frequent and personalised feedback that has a lot of potential in this process, is used insufficiently and its quality is generally low and often its impact on learning is limited ([4]). In this paper we report a study that was conducted in a context of a European project¹ that aims to improve learning in a workplace by means of personalised and visualised feedback. Prior to moving to the requirements of feedback, we need to establish the most crucial activities student teachers need to develop in their initial teacher training.

Several innovative concepts were utilised in this study to develop a framework to assess and foster the development of student teachers' performance-based competency requirements. Firstly, the concept of *core practice* ([5], [6], [7], [8]) that directs teacher educators to identify and organise initial teacher education around the most crucial professional activities a teacher has to carry out. Core practices are activities that occur with high frequency in teaching practices and student teachers can actually begin to master, allow student teachers to learn more about pupils and about the integrity and complexity of teaching. It means that teaching tasks for teaching practice should be carefully selected in a way that implementation of these tasks supports the best way linking theory with practice and competence in teaching. Secondly, *entrusted professional activity* (EPA), concept that originates from medical education, also emphasises identification of crucial professional activities in practice, but also points out that these activities need to be practiced under supervision until the student is entrusted to carry them out independently ([9], [10], [11]). Thirdly, the idea of *rubrics*, i.e. descriptions of parts or aspects of work with associated performance level descriptions which might be used for supporting student teachers assessment and feedback ([12]).

Following the framework an initial assessment rubric of the student teachers' performance-based competency requirements was developed in collaboration between Dutch and Estonian researchers and teacher educators for supervising student teachers' professional development during school

¹ This study is part of a larger project WATCHME (Workplace-based e-Assessment Technology for Competency-based Higher Multi-professional Education, <http://www.project-watchme.eu/>) on the improvement of workplace-based feedback and assessment and professional development by means of learning analytics.

internship. The rubric is concurrent with the national teaching standards in The Netherlands and in Estonia and in line with other well-recognised guidelines of teacher education ([13], [14], [15]). According to the initial rubric, student teachers have to fulfil five different professional roles: Designer, supervisor, and evaluator of learning activities; Manager of the work environment; Pedagogue; Member of professional community; and Manager of own professional development. Within each role one or more (depending on the role) professional activities (see appendix 1) have to be carried out. The professional activities all refer to activities required for teaching profession in primary or secondary schools (it is expected that the professional activities are applicable to both settings). All professional activities are assessed and evaluated based on their associated performance levels (see example in appendix 2). The performance level descriptions will be used to assess and evaluate at which proficiency level (in the initial version 1=starting, 2=sufficient, 3=good, 4=excellent) a student teacher carried out the professional activities. Based on this information, suggestions for improvement can be provided by the supervisor. For example, if a student teacher is assessed and evaluated at performance level 2 (sufficient), feedback can be provided to guide the student teacher towards level 3. Based on the performance level descriptions new learning goals and support for how to achieve them can be formulated. Student teachers pass the school internships when they, at least, master all professional activities at the sufficient level.

The assessment rubric of the student teachers' performance-based competency requirements was developed in collaboration with researchers and teacher educators from different contexts. In order to increase the validity of the developed model for the Estonian teacher education context, a Delphi method was implemented. In this paper we report on this validation study. The Delphi method is an iterative process used to collect and distil the judgments of experts using a series of questionnaires interspersed with feedback ([16]) allowing a group of individuals, as a whole, to deal with a complex problem ([17]), avoiding direct confrontation of the experts with one another ([18]). The research questions for the Estonian validation study were:

1. Which professional roles and activities do student teachers need to master during their internship?
2. Which performance levels can be used to assess and guide student teachers' professional development?

2 METHOD

2.1 The sampling of the experts' panel

The panel for the Delphi study in Estonia was selected based on two principles: (a) the stakeholders who will use the assessment rubric for assessing the student teachers, (b) the stakeholders who have an applicable specialty, knowledge or relevant experience in this matter ([17]). Although the Delphi method is modified to certain circumstances and research questions and there is no "typical" size of a sample ([16]), a suggestion of 10–18 experts is recommended ([19]). Out of 15 selected stakeholders 11 individuals participated in all three round of the Delphi study (13 in the first round, 12 in the second and 11 in the third round). The final panel consisted of five experienced and acknowledged teachers, who mentor student teachers during their school internship at schools and six teacher educators from the university, who supervise student teachers' school internship from the perspective of university studies. The anonymity and confidentiality was granted for the experts.

2.2 Data collection

The number of rounds in Delphi study can be variable and dependent upon the purpose of the research ([16]). The present study consisted of three rounds. In the first round the panel experts received the questionnaire and the assessment rubric, for each following round a new questionnaire and rubric was developed based on the results of the previous round. After each round the panel experts received feedback about the main changes that were done in the rubric based on their judgments and comments. The experts filled out the questionnaire in a GoogleDocs environment. The assessment rubric was sent to the panel by e-mail. The data was collected in November and December 2014.

The stakeholders were asked to rate the relevance of the rubric's different components: professional roles (1st and 3rd round), professional activities (1st and 3rd round) and performance levels (1st, 2nd and 3rd round). The reason for leaving the assessment of professional roles and activities out from the 2nd

round was the high agreement rates of the roles and activities in the 1st round. The panel had to rate the relevance of the rubric's components on a 5-point Likert scale and write any comments they found necessary. They were also asked to comment on the overlapping aspects of the formulations. In order to reach an agreement between the judgments, a statistical percentage of 75% of the 4 or 5 point rate was aimed.

2.3 Data analysis

The purpose of the data analysis was to revise the assessment rubric based on the ratings and comments of the panel experts. After each round the researchers had to decide whether particular role, professional activity or performance level should be accepted, revised or deleted. This decision was based on the stakeholders' ratings of the relevance of each professional role, activity and performance level (5 = very relevant, 1 = not relevant at all) and on the critical analysis of the suggested changes by the experts. Three researchers discussed the feedback and suggestions provided by experts and formed decisions for changing the model based on consensus.

3 RESULTS

3.1 First round

In the first round of the study, the panel rated the relevance of three parts of the rubric – professional roles, professional activities and performance levels. In general, the agreement level of the roles and activities was rather high, in the case of the performance levels, the results were diverse. The agreement on the relevance of the assessment rubric's components in rounds 1-3 are presented in appendix 1.

Agreement on the roles. The roles were recognised as relevant, because the statistical agreement of 75% was reached for all five roles. The first two roles “Designer, supervisor and evaluator of learning activities” and “Manager of the learning environment” were seen as the most crucial ones (92%), since these directly relate to the teaching responsibilities in the classroom. The lowest rating was given to the role “Manager of own professional development” (83%).

Agreement on the activities. The experts supported the relevance of all the 11 professional activities. All the panel experts (100%) considered the activity “Engages in interpersonal relationships with (groups of) pupils” as relevant. The activities that got the lowest rating (77%) were “Sets learning goals for the whole curriculum and specific lessons”, “Supervises the execution of learning activities” and “Carries out tasks which go beyond the lesson, class and subject”. This was interesting since the first two activities belong to the role “Designer, supervisor and evaluator of learning activities”, which got the highest rating. This leads to the conclusion that although the experts found the role relevant, the activities had to be reformulated.

Agreement on performance levels. The agreement on the performance levels was not so high: the statistical agreement of 75% was reached in 6 out of 11 sets of the performance levels. The highest rating was given to “Supervises the execution of learning activities” (100%) and the lowest to “Sets learning goals for the whole curriculum and specific lessons” (54%).

Revision of the rubric. The analysis of the experts' answers was processed and the rubric was modified based on their suggestions. Since all roles were recognised as relevant, only minor wording changes were made in relation to these (e.g. the role “Pedagogue” was changed to “Supporter of the child's development”). Regarding professional activities, one activity was added. In the perspectives of some experts, the student teachers are expected to practice research on teaching and learning during their school internship and based on this a new activity was formulated (“Carries out research on teaching and learning”). Regarding the performance levels, several changes were made based on the experts' suggestions. Firstly, it became evident that the proposed performance levels started at a relatively high level and it was necessary to introduce a lowest level (level 0) for the current context. Secondly, several changes were made to assessed dimensions underlying performance levels in accordance with Estonian context. For example, in the levels of professional activity “Tests to which extend the set learning goals have been met” several panel experts noted that testing should be changed to evaluating and the logic in the levels should be as follows: at first the student teacher learns to use the previously developed evaluation instruments and guides and knows how to choose the proper one, then he/she knows how to analyse and interpret the results and finally is able to develop new relevant evaluation instruments and guides. Thirdly, many of the experts' suggestions

regarding the terms and formulations were implemented in the performance levels. Finally, although the agreement on some of the performance levels was under 75%, it was decided to implement many changes and validate only the revised performance levels part of the model in the second round.

3.2 Second round

As explained in the previous section, in the second round of the Delphi study it was decided to validate only the revised performance levels. As a result of reformulating the levels, the agreement on the relevance of the levels was higher (see appendix 1) than in the first round.

Agreement on the performance levels. The statistical agreement of 75% was reached in all 12 sets of the performance levels. All the experts (100%) agreed on the relevance of the set “Supervises the development of the pupil as a person”. In the second round, “Carries out research on teaching and learning” had been added as a new performance activity with five performance levels. The panel experts supported the relevance of the new set of performance levels (82%).

Revision of the rubric. The revision mainly consisted of reformulating the performance levels in accordance to the Estonian context. Firstly, the panel noted that there was some overlapping in the first three activities, therefore the activities were formulated in a more concrete form. Secondly, giving supportive feedback to the pupils was added to the activity about evaluation. Thirdly, the experts perceived that the aspect of connecting theory and practice was missing from the assessment rubric therefore it was added to the activity about carrying out research on teaching and learning.

3.3 Third round

In the final round of the Delphi study, the panel was asked to rate again the relevance of all the three parts of the rubric – professional roles, professional activities and performance levels. The statistical agreement of 75% was reached in every component of the rubric, in most of the parts the agreement was 91%.

Agreement on the roles. The panel supported the relevance of all the professional roles (see appendix 1). The highest ratings (91%) were given to the roles “Designer, supervisor and evaluator of learning activities”, “Designer of the learning environment”, “Member of the professional community” and “Manager of own professional development”. Although the statistical agreement was high, there ratings were lower compared to the first round. This can be explained with the dropout of three experts because of the demanding character of the study in terms of time and the length of the questionnaire.

Agreement on the professional activities. The relevance of the professional activities was also rated very highly by the panel experts. The percentage was either 91% or 90% therefore all the activities were agreed and accepted by the experts.

Agreement on the performance levels. The support to the relevance of the performance levels increased to 91% for almost all of the levels. Only the new activity “Carries out research on teaching and learning” received the rating of 82%.

Revision of the rubric. Some minor changes in the wording of the professional roles, activities and performance levels were implemented based on the suggestions of the experts.

4 CONCLUSIONS

The aim of this study was to validate the performance-based competency requirements model for the initial teacher education in Estonia. The research questions were: which professional roles and activities do student teachers need to master during their internship; which performance levels can be used to assess and guide student teachers’ professional development?

Although in recent decades performance-based educational models have gained considerable attention in teacher education, frequent and personalised feedback is still used insufficiently. For this reason, several innovative concepts (i.e., core practice, entrustable professional activities and rubric assessment) were utilised to develop a new framework to assess and foster the development of student teachers’ performance-based competency requirements in the current study. In order to validate the developed model, eleven teacher education experts participated in three rounds of the Delphi procedure to rate the relevance of the developed assessment rubric and to comment on their ratings.

The validation process resulted in a high degree of consensus for the assessment rubric, involving five professional roles, twelve professional activities and five performance levels for each activity. Based on the comments of the experts, the role about designing, supervising and evaluating the learning activities and the associated five professional activities were seen as the most crucial ones since they directly relate to the teaching responsibilities in the classroom. The student teachers are expected to carry out research on teaching and learning in their internship, therefore a new professional activity was added to the assessment rubric. Further, because the presented performance levels started at a relatively high level for the Estonian context, a new level (the lowest level 0) was introduced. In several cases, changes were made to the assessed dimensions underlying performance levels.

The main limitation of the study was the small number of experts in the panel. Out of 15 teacher education experts, 11 experts participated in all of the three rounds. Although a small homogeneous group may achieve sufficient results, there is an increase in decision quality as the sample size increases ([16]). Secondly, the aim of the study was to revise the assessment rubric based on the ratings and comments of the experts and to reach the consensus of 75% on the relevance of the components. Since the major revising was done considering the formulation of the components, the suggestion for future research is to ask feedback for two different dimensions: the relevance and the formulation of the components.

As a result of the Delphi study it is possible to present a new student teachers' assessment rubric for the teacher education in Estonia. The professional roles, activities and performance levels can guide and direct the workplace-based learning of the student teachers during their internship. The activities and levels provide the basis for the development of an electronic portfolio system and the application of learning analytics in teacher training. The aim of the latter is to provide easily accessible, dynamic and visual overview of the student teachers' professional development to themselves and their supervisors. The next step of the study is to investigate the effects of the implementation of the assessment rubric in Estonia.

REFERENCES

- [1] Van der Schaaf, M.F., & Stokking, K.M. (2011). Construct Validation of Content Standards for Teaching. *Scandinavian Journal of Educational Research*, 55 (3), 273-289.
- [2] Ericsson, K. A., Charness, N., Feltovich, P. J., & Hoffman, R. R. (Eds.). (2006). *The Cambridge handbook of expertise and expert performance*. New York: Cambridge University Press.
- [3] Hattie, J. (2009). *Visible learning. A synthesis of over 800 meta-analysis relating to achievement*. Routledge: Oxon.
- [4] Miller, A. & Archer, J. (2010). Impact of workplace-based assessment on doctors' education and performance: a systematic review. *British Medical Journal*, 341.
- [5] Ball, D., & Forzani, F. M. (2009). The Work of Teaching and the Challenge for Teacher Education. *Journal of Teacher Education*, 60(5), 497–511.
- [6] Grossman, P., Hammerness, K., & McDonald, M. (2009). Redefining teaching, re-imagining teacher education. *Teachers and Teaching: Theory and Practice*, 15(2), 273–289.
- [7] Zeichner, K. (2012). The Turn Once Again Toward Practice-Based Teacher Education. *Journal of Teacher Education*, 63(5), 376–382.
- [8] Windschitl, M., Thompson, J., Braaten, M., & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 96(5), 878–903.
- [9] Ten Cate, O. (2005). Entrustability of professional activities and competency-based training. *Medical education*, 39(12), 1176–1177.
- [10] Ten Cate, O., & Scheele, F. (2007). Competency-Based Postgraduate Training: Can We Bridge the Gap between Theory and Clinical Practice? *Academic Medicine*, 82(6), 542–547.
- [11] Ten Cate, O. (2013). Nuts and Bolt of Entrustable professional activities. *Journal of Graduate Medical Education*, 5(1), 157–158.
- [12] Dekker-Groen, A. M., Van der Schaaf, M. F. & Stokking, K. M. (2012). Performance standards for teachers supporting nursing students' reflection skills development. *Journal of Nursing Education and Practice*, 2(1), 9–19.

- [13] Bourgonje, P. and Tromp, R. (2011). Quality Educators: An International Study of Teacher Competences and Standards. Education International/Oxfam Novib. Retrieved from <http://download.ei-ie.org/Docs/WebDepot/Quality%20Educators.pdf>.
- [14] National Board for Professional Teaching Standards. (1987). The Five Core Propositions. Retrieved from <http://www.nbpts.org/five-core-propositions#sthash.rdAKZJ2w.dpuf>.
- [15] The Council of Chief State School Officers. (2013). Interstate Teacher Assessment and Support Consortium InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0: A Resource for Ongoing Teacher Development. Retrieved from: http://www.ccsso.org/Documents/2013/2013_INTASC_Learning_Progressions_for_Teachers.pdf
- [16] Skulmoski, G.J., Hartman, F.T & Krahn, J. (2007). The Delphi Method for Graduate Research. Journal of Information Technology Education, 6, 1–21.
- [17] Linstone, H.A. & Turoff, M. (Eds.) (2002). The Delphi method: techniques and applications, (pp. 37-71). Retrieved from: <http://is.njit.edu/pubs/delphibook/>.
- [18] Dalkey, N., & Helmer, O. (1963). An experimental application of the delphi method to the use of experts. Management Science, 9(3), 458-467.
- [19] Okoli, C. & Pawlowski, S. D. (2003). The Delphi method as a research tool: an example, design considerations and applications. Information & Management, 42, 15-29.

APPENDIX 1

The initial and the final formulation and the agreement on the relevance of the assessment rubric's components in rounds 1-3

| The initial formulation of the components | The final formulation of the components | 1. round % (n) | 2. round % (n) | 3. round % (n) |
|--|--|--------------------------------|-------------------|-------------------|
| PROFESSIONAL ROLES | | PROFESSIONAL ROLES | | |
| Designer, supervisor and evaluator of learning activities (subject didactician and supervisor of the learning process) | Designer, supervisor and evaluator of learning activities (subject knowledge and supervisor of the learning process) | 92 (13) | - | 91 (11) |
| Manager of the work environment | Designer of the learning environment | 92 (13) | - | 91 (11) |
| Pedagogue | Supporter of the child's development | 85 (13) | - | 82 (11) |
| Member of the professional community | Member of the professional community | 84 (13) | - | 91 (11) |
| Manager of own professional development | Manager of own professional development | 83 (12) | - | 91 (11) |
| PROFESSIONAL ACTIVITIES | | PROFESSIONAL ACTIVITIES | | |
| Sets learning goals for the whole curriculum and specific lessons | Sets learning goals for the lessons and knows the learning goals of the curriculum | 77 (13) | - | 91 (11) |
| Designs learning activities (incl. materials and media) for the set learning goals. | Chooses or designs appropriate learning materials and methods according to the learning goals | 85 (13) | - | 91 (11) |

| | | | | |
|---|---|----------|---------|---------|
| Plans the execution and supervision of the learning activities. | Plans the execution of learning activities | 92 (13) | - | 91 (11) |
| Supervises the execution of learning activities. | Carries out the learning activities | 77 (13) | - | 91 (11) |
| Tests to which extend the set learning goals have been met. | Evaluates the pupils' accomplishment of the learning goals and gives them feedback | 92 (13) | - | 91 (11) |
| Engages in interpersonal relationships with (groups of) pupils. | Is interested in pupils as individuals and as a group, builds a supportive relationship | 100 (13) | - | 91 (11) |
| Directs the communication processes in the group. | Directs the communication processes in the group | 92 (13) | - | 90 (10) |
| Supervises the development of the pupil as a person. | Supports the development of the pupils as persons | 85 (13) | - | 91 (11) |
| Carries out tasks which go beyond the lesson, class and subject. | Carries out tasks beyond the lesson and the subject | 77 (13) | - | 91 (11) |
| Collaborates with colleagues and, if necessary, parents and other stakeholders. | Collaborates with colleagues (including support specialists) and parents | 85 (13) | - | 91 (11) |
| Takes initiatives to improve his/her personal professional activities. | Analyses and improves his/her professional activities and knowledge | 92 (13) | - | 90 (10) |
| - | Investigates teaching and learning | - | - | 91 (11) |
| PERFORMANCE LEVELS | PERFORMANCE LEVELS | | | |
| Sets learning goals for the whole curriculum and specific lessons | Sets learning goals for the lessons and knows the learning goals of the curriculum | 54 (13) | 92 (12) | 91 (11) |
| Designs learning activities (incl. materials and media) for the set learning goals. | Chooses or designs appropriate learning materials and methods according to the learning goals | 69 (13) | 92 (12) | 91 (11) |
| Plans the execution and supervision of the learning activities. | Plans the execution of learning activities | 77 (13) | 83 (12) | 91 (11) |
| Supervises the execution of learning activities. | Carries out the learning activities | 100 (11) | 83 (12) | 91 (11) |
| Tests to which extend the set learning goals have been met. | Evaluates the pupils' accomplishment of the learning goals and gives them feedback | 55 (11) | 92 (12) | 91 (11) |
| Engages in interpersonal relationships with (groups of) pupils. | Is interested in pupils as individuals and as a group, builds a supportive relationship | 92 (13) | 82 (11) | 91 (11) |
| Directs the communication processes in the group. | Directs the communication processes in the group | 92 (12) | 81 (11) | 91 (11) |

| | | | | |
|---|--|---------|----------|---------|
| Supervises the development of the pupil as a person. | Supports the development of the pupils as persons | 77 (13) | 100 (12) | 91 (11) |
| Carries out tasks which go beyond the lesson, class and subject. | Carries out tasks beyond the lesson and the subject | 61 (13) | 92 (12) | 91 (11) |
| Collaborates with colleagues and, if necessary, parents and other stakeholders. | Collaborates with colleagues (including support specialists) and parents | 62 (13) | 82 (11) | 91 (11) |
| Takes initiatives to improve his/her personal professional activities. | Analyses and improves his/her professional activities and knowledge | 75 (12) | 91 (11) | 91 (11) |
| - | Carries out research on teaching and learning | - | 82 (11) | 82 (11) |

% = the percentage of the rating 4 and 5; n = the size of the sample

APPENDIX 2

Example of an initial and final version of professional activity and associated performance levels (activity nr 5)

| | Initial version | Final version |
|-----------------------|--|---|
| Professional activity | Tests to which extend the set learning goals have been met | Evaluates the pupils' accomplishment of the learning goals and gives them feedback |
| Level 0 | (no level 0) | The teacher has difficulties to find and choose previously developed evaluation instruments and guides. He/she does not interpret the results and does not give supportive feedback to pupils. |
| Level 1 (starting) | The teacher makes use of tests and correction models which are offered by publishers and others. She/he makes use of evaluation forms which only serve as an evaluation instrument. The teacher has little attention for the interpretation of the acquired test results. | The teacher chooses previously developed evaluation instruments and guides. He/she interprets the results seldom. He/she rarely gives pupils a supportive feedback. |
| Level 2 (sufficient) | The teacher is aware of shortcomings of existing tests (incl. the correction models) and adapts them. The teacher interprets acquired test results and corrects, if needed, the grade accordingly. He/she occasionally includes other evaluation forms for the assessment. The teacher does not use the evaluation forms as a diagnostic instrument for the advancement of the learning of the pupils and self learning. | The teacher chooses previously developed evaluation instruments and guides. He/she is critical about the instruments and guides, and if necessary, he/she adapts these. Most of the time the teacher interprets the results and gives pupils a supportive feedback. |

| | | |
|----------------------|--|--|
| Level (good) | 3 The teacher realises when existing tests are inadequate and designs for that purpose a new test (incl. correction model). He/she interprets the acquired test results and offers suggestions for improvement. The teacher uses different evaluation forms as assessment instrument and, where relevant, as diagnosis instrument to promote the learning of pupils and self-learning. | The teacher chooses previously developed evaluation instruments and guides. He/she is critical about the instruments and guides, and if necessary, the teacher adapts and varies these. He/she analyses and interprets the results regularly and gives pupils a supportive feedback. |
| Level (excellent) | 4 The teacher knows when new tests are desired and designs new and adequate tests (incl. correction model). He/she checks the reliability and validity of the tests and offers suggestions for improvement. The teacher integrates different types of evaluation forms to promote the learning of pupils and self learning. | The teacher knows when the new evaluation instruments are necessary and in case of need, he/she develops new relevant instruments and guides in addition to the available ones. He/she checks the reliability and validity of the instruments. The teacher varies different types of evaluation, also analyses and interprets the results. He/she gives pupils a supportive feedback and guides them to acquire new studying strategies. |