

University of Pécs ‘Education and Society’

Doctoral School of Education



Ildikó Zank

**Action research as a framework for teacher
education**

A possible model for reflective-cooperative competency-based
teacher training embedded in action research

Theses of Doctoral (PhD) Dissertation

Supervisor: Dr. habil Julianna Mrázik

Pécs

2023

Table of contents

Introduction.....	3
1. Relevance and significance of the topic	3
1.1 Formulation of the research questions	3
2. Research methodological background	4
2.1 The main research strategy of the dissertation: action research	4
2.2 Methodological aspects of action research	5
3. Sub-methods within the frame of action research	6
3.1 Qualitative text analysis based on Grounded Theory	6
3.2. Quantitative data collection: administering and evaluation of the Psychological Immune Competence Inventory (PICI)	9
4. The implementation of action research	11
5. Scientific results of the dissertation	13
5.1 Interpretation of the results	13
5.2 Recommendations based on the research findings	15
5.3 Answering the research questions	16
7. Summary.....	18
8. References	19
9. Scholarly activity of the author	20
9.1 Conference presentations on the dissertation topic	20
9.2 Conference presentations on other topics	22
9.3 Publications on the dissertation topic	23
9.4 Publications on other topics.....	24

INTRODUCTION

“The mind is wandering, picking and choosing, pretending free will, imagining itself rational while it is unrestrained.”

Vilmos Csányi ¹

Teacher education that emphasises adaptation, lifelong learning, the development of personal competences and individual autonomy has made reflectivity a central concept, which is considered a driving force in the formation of professional self-image and identity. In addition to the perception, awareness and critical analysis of one’s own thought patterns, the emotional dimension of reflections may also emerge, thereby supporting, or hindering attitude change. In our research, we therefore investigated the possibilities, criteria and hurdles of developing reflective practice in the construction of the professional self-image of prospective teachers in the context of action research, with the aim to improve the practice of teacher education.

1. RELEVANCE AND SIGNIFICANCE OF THE TOPIC

The results of international and national research point to the phenomenon that teacher candidates entering higher education already possess an unreflected personal opinion, an established set of beliefs (Falus, 2002, 2006; Dudás, 2007; Kimmel, 2007), and these strong, naive views act as a filter, an interpretive lens during teacher education influencing its effectiveness. An important lesson we learn from research is that pre-training experiences emerging in the personal narratives of students influence the development of their professional self-image (Hercz, 2016) while the successful exploration of these experiences support the professional socialisation process of prospective teachers (Szivák, 2002), by overcoming deep-rooted patterns. The problem background of our research is the possibility of shaping students’ professional self-image in the context of teacher training. Action research was carried out as part of the teacher education programme at the University of Pécs, Faculty of Humanities, Institute of Education Sciences embedded in a course for second year students (Education and School) using the methodology of co-operative learning and collaborative teaching, as well as applying a bilingual model. During the course we created conditions that enabled the students to reflect on their own emerging experiences.

1.1 Formulation of the research questions

In line with the action research methodology, the research was based on a set of open-ended questions and problems rather than hypotheses. Our research aimed at exploring the extent to which reflective practice in action research influences the views of students, and at investigating the means, conditions and limitations of developing reflective practice. Our research questions were formulated with a view to embeddedness (possible interventions) in action research:

¹ Csányi Vilmos (2019) The global mind. Reflections on the world. Libri Könyvkiadó (translation by the author)

How can students' reflection be deepened, i.e., how do teacher candidates move from reflecting on the teaching/curriculum to reflecting on the learning process?

How can we encourage students to reflect more consciously on the teacher-role (their own, constantly evolving image as a teacher) in addition to their own reflections as students? How can we promote a more conscious use of student reflections in order to support their own professional development?

2. RESEARCH METHODOLOGICAL BACKGROUND

The research presented in the dissertation can be related to Embedded Design, whose most important criterion is that the results of the secondary (quantitative) method should be interpreted as embedded in the data of the primary (qualitative) method (Sántha, 2015). In our case, the quantification procedure (administering the Psychological Immune Competence Inventory) is embedded in a predominantly qualitative study (analysis of reflective texts applying Grounded Theory).

2.1 The main research strategy of the dissertation: action research

In contrast to normative research, action research does not seek to investigate isolated phenomena, but rather to evaluate and learn from uncontrolled change resulting from interventions. Our own interpretation is close to the approach that defines action research not as a method, but rather as a scientific approach (Grasselli, 2009) or strategy that does not aim to prove a hypothesis, but to create a model that can be applied in the field of education. This dissertation provides a multi-perspective overview of action research as a scientific approach and our main research strategy, following a logic that moves from macro-level (historical, social) interpretations through meso-level (pedagogical) interfaces to micro-level perspectives of the researcher.

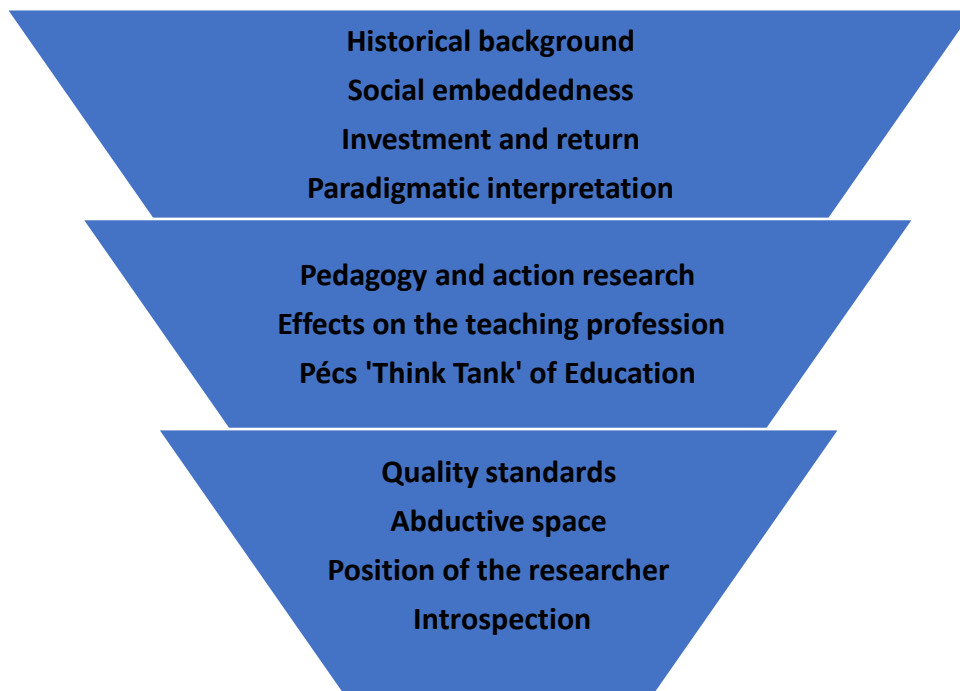


Figure 1: A multi-perspective overview of action research (own editing)

2.2 Methodological aspects of action research

By choosing action research as a participatory paradigm, the researcher accepts that there is no such thing as value-neutrality or a completely objective research and is aware that their own role must be subject to constant critical scrutiny in the process. The emphasis is put on reflection, on making explicit the potential for bias in a process in which the researcher is willing to confront him/herself (Mitev, 2015). The aspects of (internal) validity of participatory action research are defined by Csillag (2016) as the pillars for ensuring authenticity: critical attention and openness, integration of theory and practice, participation based on methodological-cognitive, political, and emotional empowerment. Since action research is highly context-dependent and examines complex, unpredictable life situations, its reproducibility is not possible and generalisation (external validity) is limited, conceivable only in methodological terms (Bodorkós, 2010). The process approach of action research requires the researcher to constantly move back and forth between data and theoretical construction, generating new interpretations. Abduction can be understood as a similar mental process, which 'gathers all the related information' (Gyészli-Sántha, 2015) on a given research, in which the place and value of different data and knowledge depend on the extent to which they contribute to understanding the problem in question. The relationship between multi-threaded data collection and analysis and multi-directional research and thinking is illustrated in Figure 2:

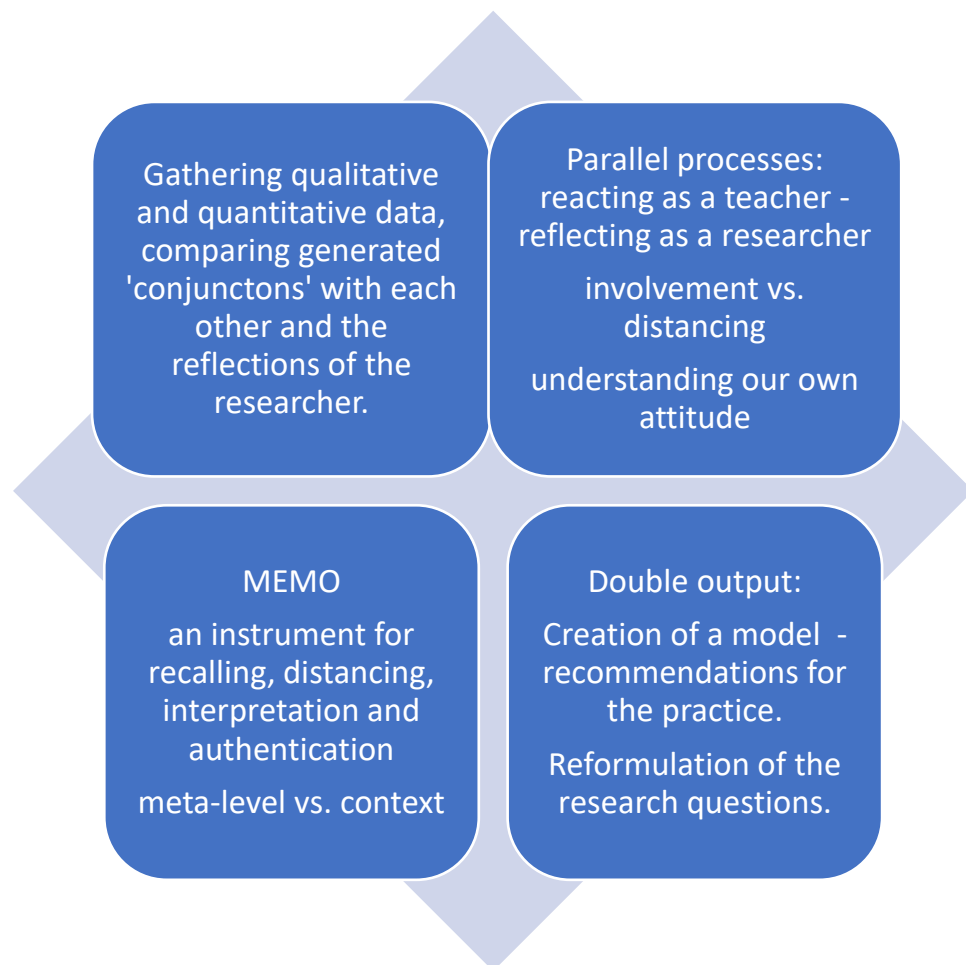


Figure 2: Action research as an abductive space (own ed.)

Criticisms of participatory action research often focus on the objectivity of the researcher and the emotional engagement that is not only a yield but also a prerequisite of this type of research (Málovics, 2019), since one of the pillars of the integrity of action research is engagement, the empathy resulting from knowing the problem. The contradiction can be resolved by understanding the methodological rigour (detachment, critical attention, reflexivity) and the relevance of research (empathy, engagement, contextualisation, co-created knowledge) not as polarities but as two independent variables, so that the quality of our research is determined by the highest possible level of fulfilment of both criteria (Levin 2012).

3. SUB-METHODS WITHIN THE FRAME OF ACTION RESEARCH

3.1 Qualitative text analysis based on Grounded Theory

The specificity of our research is that the sample was identical with group of prospective teachers who participated in the action research and became our partners. We asked the teacher candidates participating in the course “*Education and School*” to reflect on the topic of each lesson and their experiences gained during the lessons, by completing the same twelve sentences in their own words on each occasion. The 2,004 responses (regarded as whole sentences) of the 167 completed questionnaires were transferred to an Excel spreadsheet and 12 texts were constructed for analysis, so that the content of the cells belonging to a question forms a text, which is characterised by being a fragmentary set of shorter sentences, phrases and words. In the analysis, coding was performed at word level on the corpus of text created, totalling to 12,571 words. Coding based on the text is an open, unstructured process in which “categories are formed step by step, the produced codes are continuously ordered, subsequently leading to the main and sub-codes, and eventually to the formation of a code hierarchy” (Sántha, 2022:47).

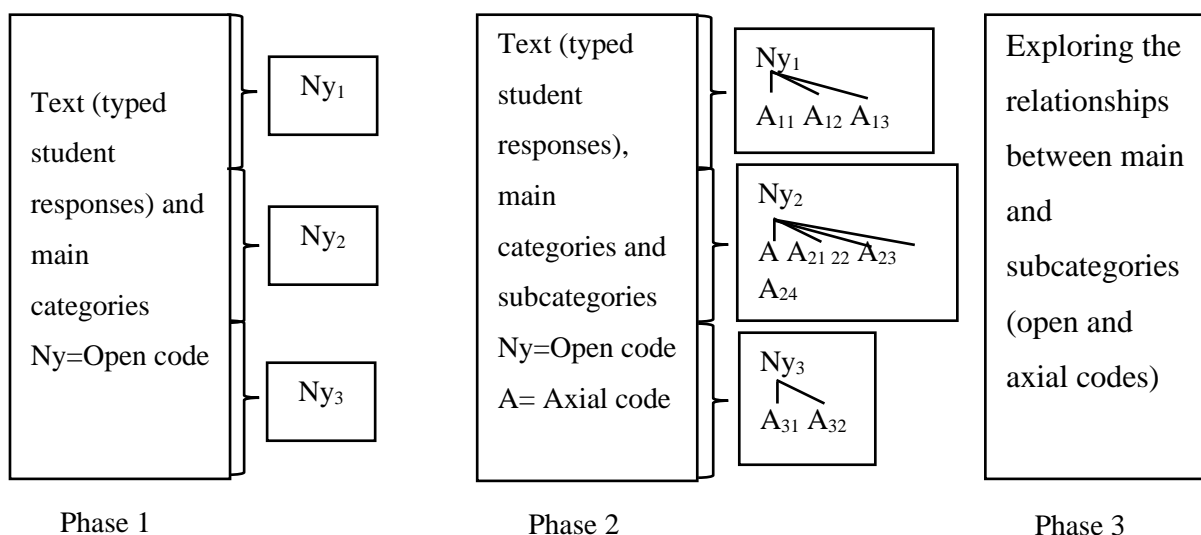


Figure 3: Phases of the coding process (based on Sántha (2015), own editing)

For reliability, we used *intra-coding* and then compared the open categories obtained from the first and second coding, for which we calculated a reliability index.

The table below shows the results obtained after two (intra)codings of the text constructed from the reflections on the third question.

Coding reflections on question 3: **My most important experience was...**

Number of possible responses: **167** Number of received responses: 167

Text length: **1142 words.** Coding 1: 05/08/2020 Coding 2: 16/11/2020.

Table 1: Open and axial coding of student reflections on question 3 (own editing)

Open coding 1 Number of main codes: 9	Axial coding 1 (subcodes)	Open coding 2 Number of main codes: 9	Axial coding 2 (subcodes)	Selective codes	MEMO
TEACHER ROLE (17)	explain (2) express an opinion (2) I could go up/talk at the blackboard (2) teach (3) I have explained give an opinion/recite text (3) I presented (2) convinced I transferred	AS A TEACHER (9)	I explained (2) had to teach (3) I could explain to the group I presented I listened to dissenting opinions (2)	GROUP IDENTITY	The experiences are much more closely linked to the student role than to the future teaching activities.
WATCHING VIDEO (40)	we watched (36) analysed (2) we talked about it we did a job on it	WATCHING VIDEO (39)	Viewed it, watched it (39) Of which mention of the video's subject: 8 times (school, meditation, stress management, multitasking, bullying)	INDIVIDUAL EXPERIENCE	Watching videos related to the learning material is the second most important experience, but it is primarily " passive activity ".
DISCUSSION (14)	in a civilised way we discussed within a group established (3) argued (4) they argued dissenting opinions (2) consult with them	STUDENT ROLES (24)	I learned (2) I got to know (2) I could have written (2) I learned we received (pen, tree drawing) (2) work with others had to be solved had to talk (lots of words, could go up, in front of a whiteboard, whole group) (4) I produced a result I guessed right express my opinion (4) teacher helped I said the words I passed on the information I read	STUDENT ROLE	The role of the learner in class reflects the fulfilment of expectations and activities are often linked to permission (I could talk, I could go up, I could write) or compulsion (the word 'had to' is used 14 times). Reflection on English/foreign language at the level of experience is negligible and mainly passive (comprehension) and negative in two cases.
PHYSICAL EXPERIENCE (6)	voice warm-up (2) paper folding write with left hand (2) glued	PHYSICAL ACTIVITY (5)	voice exercises (2) paper folding write with left hand (2) I could talk to		
ENGLISH (5)	I understood the text/block (3) I did not understand the task the others cannot speak	ENGLISH (9)	I understood the text/block (3) watched film/video (2) had to solve the problem I could talk to the others cannot speak I did not understand the task		

COMMON PRODUCTS (10)	poster (5) cards to be pinned mind-map/ mind-map/ cluster chart (4)	COMMON PRODUCTS (14)	We put together a T-chart We made a poster (6) We made a cluster diagram (2) We made a mind map (2) We made a poster We decorated the cards to be pinned		The identity of micro-groups is expressed through common activities and common products. There is a lack of personal contact and empathy.
JOINT ACTIVITIES (28)	sharing ideas (2) problem solving (4) working together (11) thinking meeting (4) Role change reading at assistance storytelling choice of names development	COMMON LEARNING ACTIVITIES (49)	read (4) idea shared (2) we talked about something (5) argued (13) (discussed, argued, exchanged views) we worked together (co-op) (12) tasks solved (5) we were thinking we have isolated the concept of summarised by compared we looked at the causes downloaded from analysed (2)		The group as a space for useful, shared work, where the individual can take ownership. (This is evidenced by the high number of mentions in the debate and exchange of views.)
COGNITIVE ACTIVITIES (13)	I understand (3) I found out summary (2) I could have known (2) I got to know (2) interpretation compare I learned	GROUP IDENTITY (5)	name chosen (had to) developed by worked well we helped each other personal stories		Higher levels of cognitive activities are also displayed.
EMOTIONAL INVOLVEMENT (14)	we laughed (4) listened to I am enchanted I am encouraged I was embarrassed pride (2 result, I guessed right) was a negative experience (4)	EXPRESSION OF EMOTIONS (11)	I was heard it was good to listen we laughed (4) I am enchanted did not annoy me I was embarrassed unfortunately they did not show up there were too many		Emotional reflections show positive or neutral attachment to the group or express dissociation .

During the generation of selective codes and their textual interpretation, we relied heavily on research memos produced during the open and axial coding process and sought to answer the following questions:

- What is emphasised in the student reflections/what are the reflections directed at?
- Which identity/experience/activity is increasing in frequency?
- What attitudes/views/expectations can be outlined?
- Is there any emotional content and what are the themes it is related to?

The selective codes are central concepts that emerge from the assimilation and refinement of the categories represented in the axial codes. Selective codes “describe all other codes with sufficient depth and explanatory power” (Somogyi et al., 2018:9), and help to interpret the situations and phenomena observed in action research, as well as providing insights into the viewpoints and thought patterns of the teacher candidates participating in the research. In the

following table, a total of 31 selective codes are presented, generated from the texts related to each question.

Table 2: Summary of selective codes (own editing)

Question	Selective code 1	Selective code 2	Selective code 3
1. I liked/disliked this topic because...	Student role	Usefulness	-----
2. In this class I learned...	Subject knowledge	Self-awareness	Teacher role
3. My most important experience was...	Student role	Individual experience	Group identity
4. These are the skills I have developed...	Cooperation	Emotional Intelligence	Communication
5. Looking back, I think that what I would do differently is...	Taking responsibility	Distancing oneself	-----
6. What I questioned...	Course content	Meta-reflections	-----
7. Things I need to improve on...	Working in the group	Own learning	Communication
8. The biggest improvement I have made is...	Becoming oneself	Emotional Intelligence	Change of mindset
9. The role/activity in which I felt most comfortable...	Security of roles	Isolation	Security of group
10. The role/activity that made me feel bad/embarrassed...	Taking responsibility	Sensitising	Language anxiety
11. The most important thing I got from the group/learnt from others...	Supportive environment	Knowledge and perspectives	-----
12. The most important thing I have taught others...	Supportive behaviour	Usefulness	-----

3.2. Quantitative data collection: administering and evaluation of the Psychological Immune Competence Inventory (PICI)

As the PICI measures the adaptability that enables individuals to establish and maintain appropriate relationship with their dynamically changing environment while maintaining their integrity (Forrai, 2011), it was deemed suitable for measuring the impact of interventions implemented in the action research cycles during the course. In our research, we plotted psychological immunity patterns at the group level and tracked changes in the input and output of psychological immunity patterns, which indicate which components of psychological immunity we were able to influence during action research. The self-administered, validated, standard questionnaire consists of 80 statements describing typical life attitudes, which students

could decide to what extent they are characteristic of them. Accordingly, they could mark their responses on a 4-point Likert Scale, which, when combined, form scales of immunocompetence (Kocsis 2015). Each of the 16 scales identifies a dimension of coping potential. The scores of each scale indicate the effectiveness of the individual’s coping and adaptation, and presumably their indirect effects are reflected in the students’ beliefs, value choices and attitudes (Kocsis, 2016). The subdivision of the personality components (scales) into sub-scales and their interconnection is illustrated in the following figure (4):

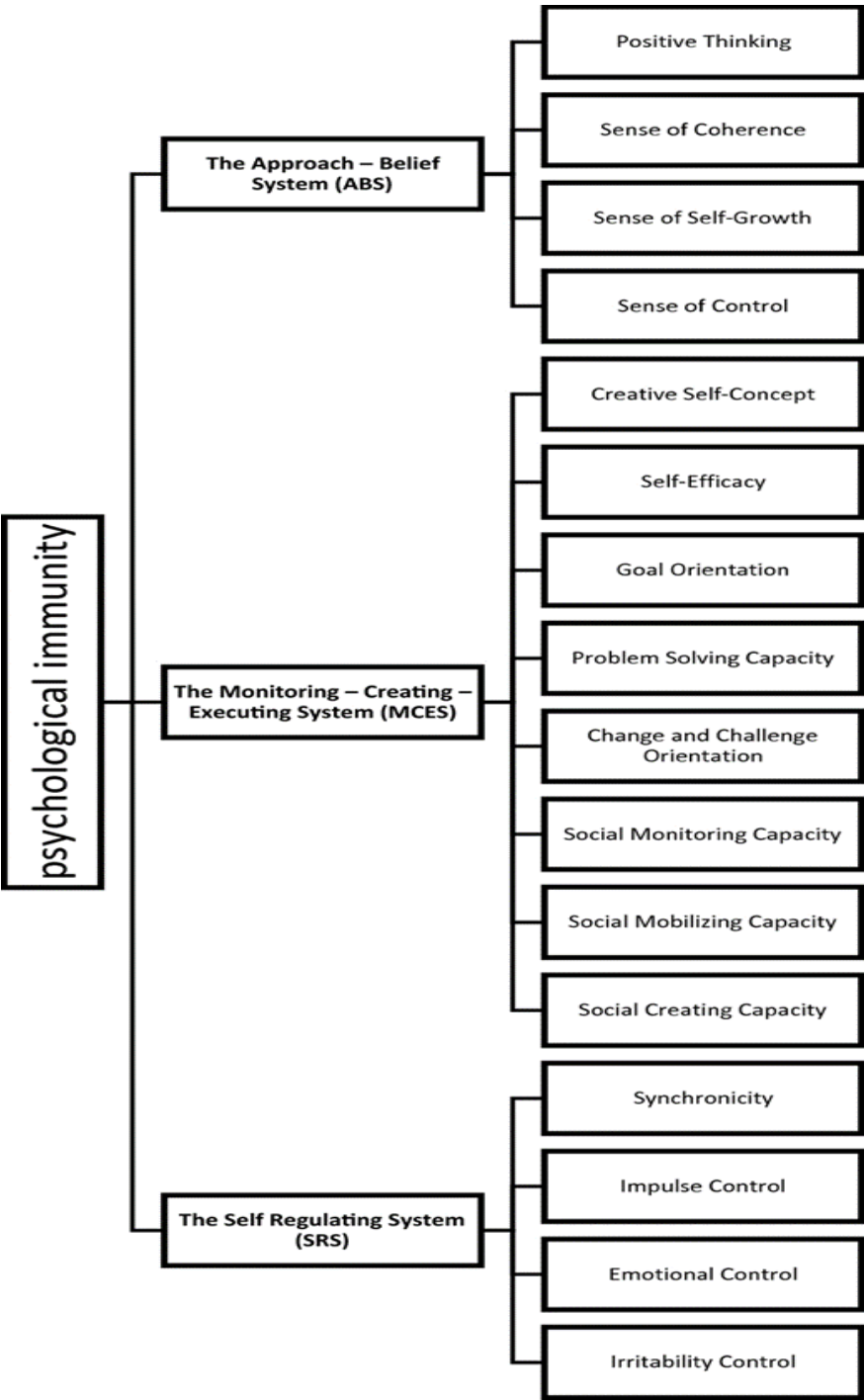


Figure 4: Source: Oláh 2005

A total of 50 participants took part in the survey, all of them full-time students on the teacher training programme of the Institute of Education Sciences at PTE BTK, taking the course “*Education and School*”. Of these, 23 completed the questionnaire as part of the action research, and a further 27 served as a control group. The Psychological Immune Competence Inventory was used as an input and output measure at the beginning (February 2019) and at the end of the course/semester (May 2019). Data were first processed using Student’s paired sample T-Test (group-level comparison of input and output scores), which assessed the scores of the three sub-systems of the Psychological Immune System for the action research study group (n=23). Secondly, the change in the total scores of the three sub-systems of the Psychological Immune System and the 16 subscales were examined for the action research study group and the control group. Analysis of covariance and group-level comparisons of the independent groups were performed using a mixed-sample ANOVA in Jamovi.

4. THE IMPLEMENTATION OF ACTION RESEARCH

The activities of action research, such as planning, action, observation, reflection and the resulting correction are cyclical. In our case, this means that the planned curriculum and the tasks developing competences were not only tested in class, but also became the subject of constant observation and monitoring, followed by the multi-level (student/instructor) reflections which in turn determined the intervention points (actions). In the cyclicity of action research one cycle was regarded as a unit that included the following four phases:

Planning: The collaboration of three teachers/instructors involved joint planning, team-teaching, participant observation as well as providing collegial reflections and acting as ‘critical friend’. For each 135-minute class three sections of complementary professional content was planned consciously building on each-others expertise and determining student input.

Action: In line with the philosophy of action research, the bilingual (Hungarian and English) classes were based on the consistent application of co-operative learning structures and teacher collaboration. In this phase, the emphasis was on students becoming allies and partners while developing new structures for cooperation and learning. We also created conditions for them to experience the need to take responsibility and to work on a possible resolution. The collegial collaboration of the three teachers was reflected in a balance between teaching disciplinary content, sensitising to special needs education and the development of foreign language competences. We integrated our expertise in team-teaching, building on each-other ideas in the teaching-learning process either planned or spontaneously.

Observation: Active participant observation took place during the classes, alternating the roles of instructor and observer. The documentation of the observations contributed to planning the activities of the next cycle and also served to separate the roles of teacher and researcher as well as maintaining a researcher’s outlook. The latter also supported changes of the teacher’s perspective on the teaching-learning process and on the students.

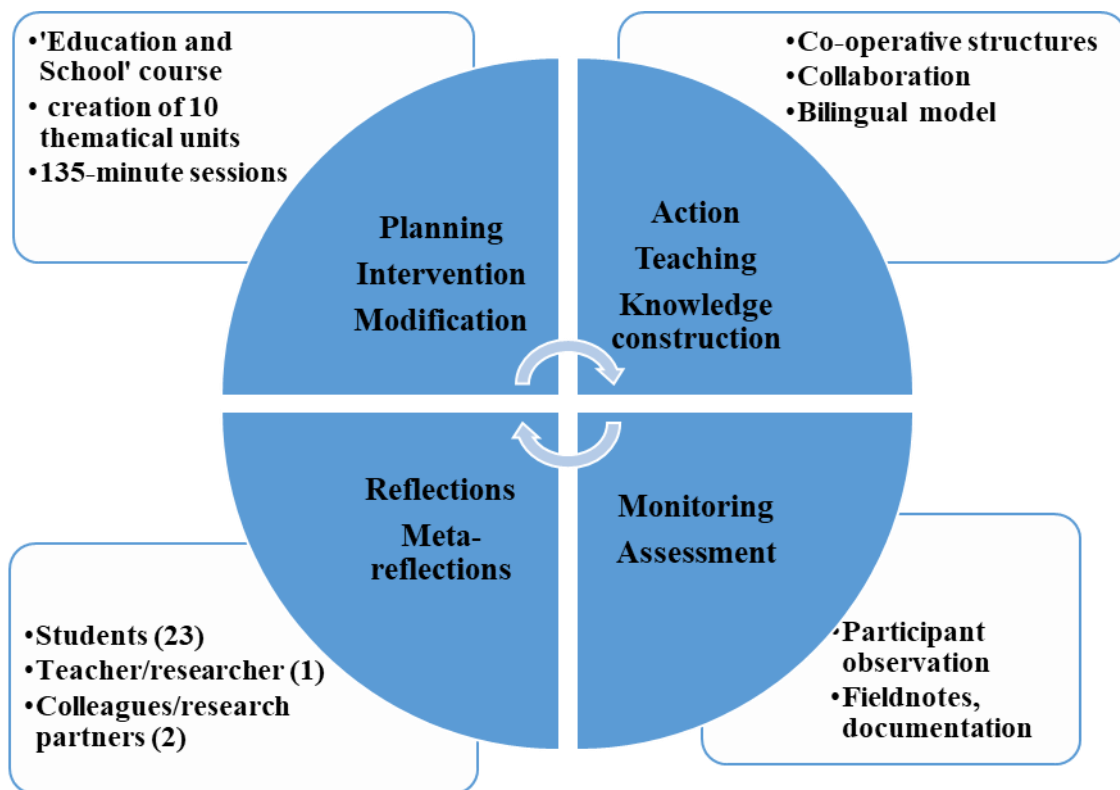


Figure 5: The action research cycle (own edit)

Reflection: Throughout the cycles of action research we encouraged a structured and systematic reflective practice and based the interventions (modification of content and/or methodology) on students' written feedback. We asked them to complete twelve sentences at the end of each session anonymously. Individual reflections – providing us with an insight of unique and personal nature - were assessed between sessions and taken into consideration in planning interventions for the next class. At the end of the course the written feedback of all students was recorded electronically and turned into a corpus of text to be analysed applying the coding process of Grounded Theory. After each teaching block, 60 minutes of face-to-face discussions between the researcher and the invited teachers took place, which served to critically examine their own teaching role and to solicit collegial reflections.

The research period: the action research was carried out between 04 February 2019 and 06 May 2019 in the framework of the seminar "Education and School". *The conditions of data collection:* we met with the students 10 times, 3x45 minutes in each session, resulting in 30 lessons in total. It was important to ensure the active and creative presence of students in the action research process, so after having received detailed information at the first session they were given the opportunity to ask questions and/or decide not to participate in the research. In order to ensure partnership and individual responsibility, a contract was signed with each student (who agreed to participate in the research), setting out the framework for cooperation, the planned topics and the conditions for course completion.

5. SCIENTIFIC RESULTS OF THE DISSERTATION

The data obtained from the analysis of student reflections and the evaluation of the questionnaires provided a more accurate picture of the malleability of attitudes and the effectiveness of the use of reflective tools in teacher education. Furthermore, it enabled us to explore the students' attitudes towards a foreign language environment (English as a medium in the classroom) and the impact of collaborative learning on students' attitudes. The nodes generated from the data can be matched with the lessons learned from instructor/researcher reflections (Zank, 2020). The practical significance of our results is the complex research and mental process supporting the development of a meta-perspective approach and the exploration of the effectiveness of innovative partnership learning, and the results can be used to define competence expectations in teacher training (Mrázik, 2019b).

5.1 Interpretation of the results

Our results were evaluated by comparing the qualitative data (key categories obtained in the process of text coding) and quantitative data (scores on the PICI scales) extracted during the action research process, by matching the nodes generated from the data with researcher/teacher observations and reflections, and by checking whether the results converge. The starting point for our interpretation is therefore the system of selective codes, for which we used Voyant Tools to visualise. To use the tool, all (31) selective codes were edited into a single coherent text, uploaded as a corpus, and then, using the Links/Collocation graphs function, network graphs were created to illustrate the close or loose connections of keywords in a given context. As an example, we present the linkage of three selective codes, “student role” “cooperation” and “emotional intelligence”:

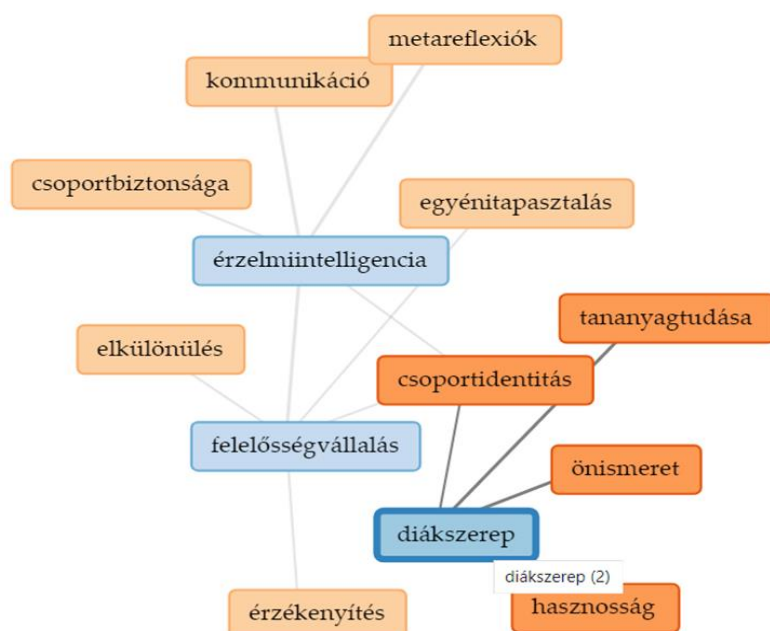


Figure 6: Student role links 2 (own ed.)

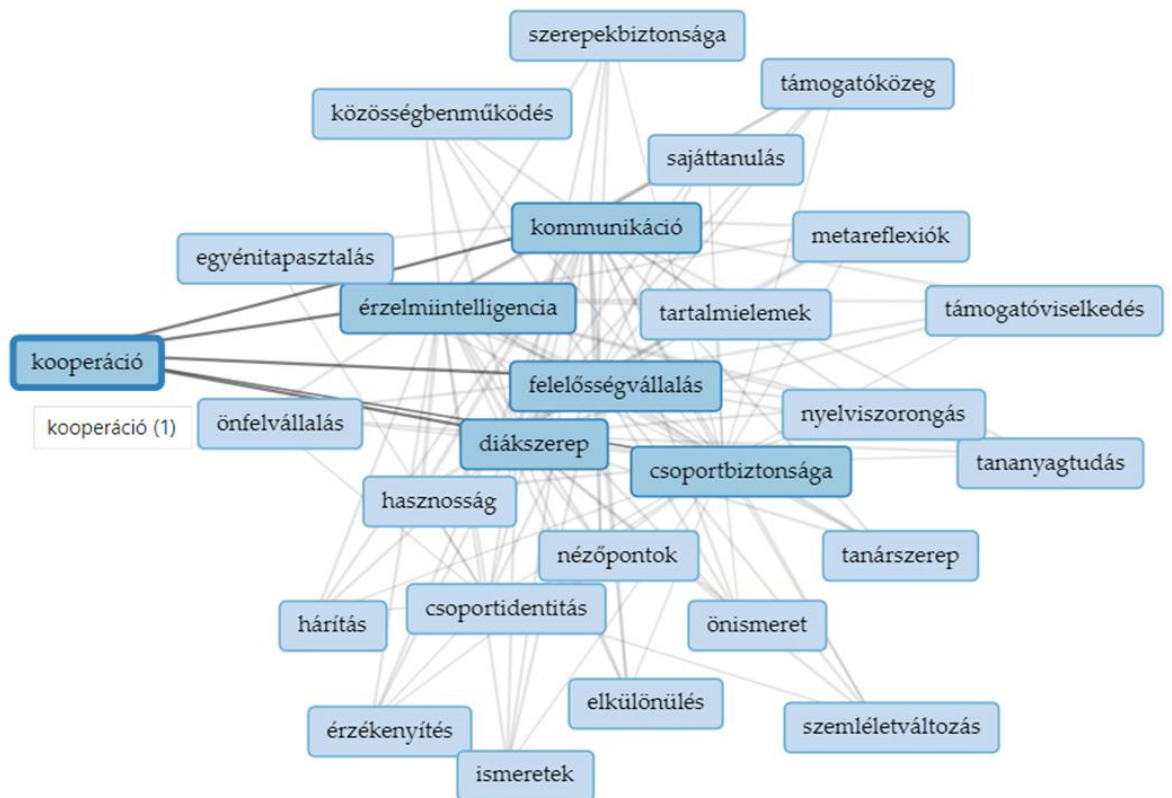


Figure 7: Cooperative links (own editing)

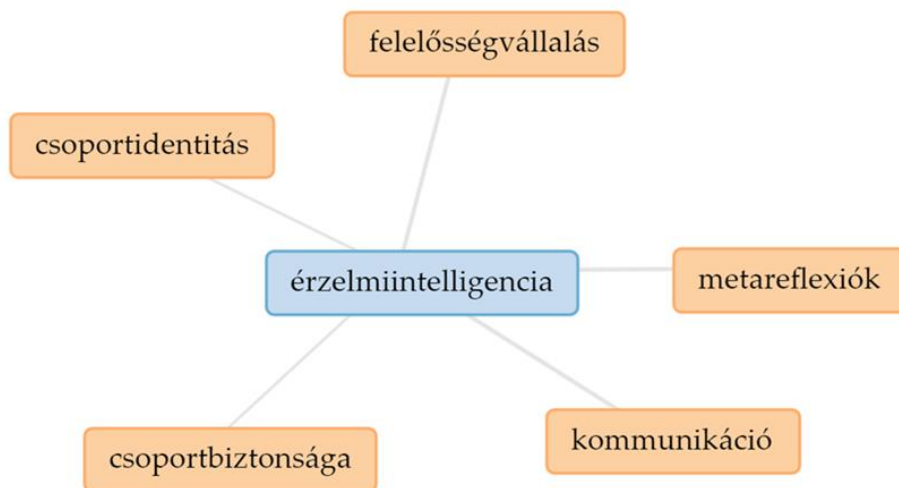


Figure 8: Emotional Intelligence links 2 (own edit)

In interpreting our results, we explored the relationships that emerged from the comparison of qualitative and quantitative data, refining and interpreting them using researcher/teacher observations recorded during the action research. Our research findings reveal the intended effects that emerged as a result of interventions throughout the action research: a shift in the student-viewpoint, the formation of a (professional) self-image based on self-awareness of prospective teachers, a readiness to reflect on the difficulty of taking responsibility and of self-acceptance, as well as the role of the cooperative structures used in activating certain areas of emotional intelligence and increasing social openness.

5.2 Recommendations based on the research findings

Based on the results of the action research, we propose a *reflective-cooperative, action-based model* for teacher training and a new methodology for the development of teacher candidates’ competences. A focal point of our proposal is the model embedded in action, the involvement of teacher candidates in the process (sensitising, raising awareness, partnership), which is key to the change of students’ attitudes, the acquisition of reflective practice which might be suitable for the personal development of students during seminar work. The following model (Figure 9) includes the factors and interventions that have been made in order to improve the professional socialisation and to shape the attitudes of teacher candidates. Since the six input factors (learning, teaching, cooperative structures, partnership with students, teacher collaboration, reflective practices) were constant components of each action cycle, we can consider this as a typified segment of the model, which allows us to draw conclusions for the system as a whole (in our case, teacher education as a whole).

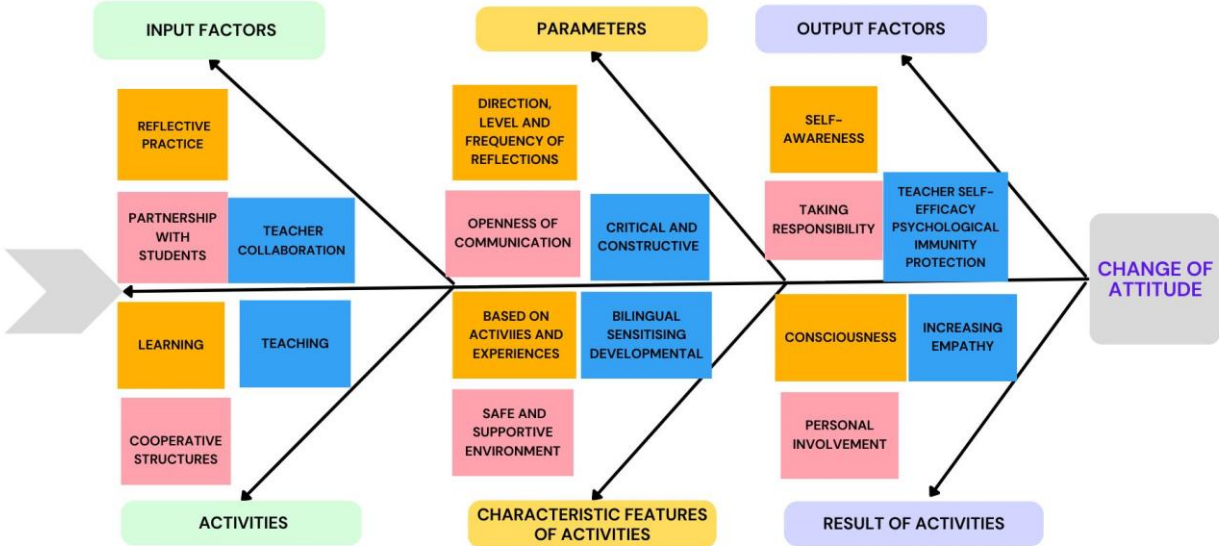


Figure 9: Reflective-collaborative, action-based model of teacher preparation (own editing)

The descriptive parameters assigned to the input factors/activities (indicated in the same colour in the figure) form a fixed set of parameters that are used to create the calibrated model shown in Figure 9. The sensitivity analysis and calibration (carried out during the measurement-assessment phase of the repeated action cycles) were performed to assess the sensitivity of the model to changes in each parameter, which would allow the parameters to be specified as accurately as possible (Szatmári, 2013).

Validation of the model: the basis for the creation of our model was action research set in the practice of teacher education, its cyclical process of linking the practice of education and its research in the context of teacher training, thus ensuring a satisfactory level of complexity of the model. Following a dynamic, iterative process of abduction, our research consciously combined the practical relevance of the research (knowledge that emerged from and could be reapplied to practice) and the construction of a theory or model (along with the exploration of researcher involvement). Observations and experiences drawn from the research process were subjected to conscious and consistent reflection and then matched with qualitative and quantitative data extracted during the process. This enabled the identification, typing, abstraction and interrelationships between the components of the model, thus fulfilling the criteria for validation (complexity and causality). Further validation of the reflective-cooperative action-based model (to demonstrate that it actually and reliably produces the expected results) is desirable and possible. Therefore we propose to adapt the model to the specific local conditions in the educational context other than the one in our study. Other areas of higher education, where the output factors of our model (self-awareness, consciousness, responsibility, empathy, change of attitude) are emphasised, may be suitable too, while adult and public education (e.g. teacher training) may also benefit from the implementation of the activities defined by the model embedded in action research.

5.3 Answering the research questions

The question we formulated before starting the research (in the context of the dilemmas that emerge during teacher training) was to what extent the attitude element of teacher competences (shaping professional self-image and identity) can be captured and influenced. In the cycles of action research, our questions were refined, becoming more precise and subtle, and thus the possibility of developing a reflective practice for students, its conditions and constraints, moved to the focus of our investigation. Our first question concerned the direction and quality of students' reflection.

How can students' reflection be deepened, i.e., how do teacher candidates move from reflecting on the teaching/curriculum to reflecting on the learning process?

Students' self-reflections were predominantly focused on the theoretical knowledge and information acquired, on the cognitive level of learning, and the importance of "knowing the subject matter" was dominant in the teacher candidates' thinking patterns. The perceived usefulness of knowledge (or the tasks to be carried out) conveyed by the subject matter of the classes was the primary consideration, while acquisition/learning was a passive, receptive process, mostly devoid of critical elements. Instead of focusing on compliance and satisfaction

expected of teacher candidates, we regularly observed manifestations of acquired inertia, making excuses and dysfunctional attitudes. In the students' reflections on their own learning processes, there was a parallel display of individual responsibility and a need to comply indicative of school-like thinking.

Interventions: In response to the observed phenomena and student reflections, our interventions focused on conscious group development, reducing the amount of classwork and consistently reinforcing cooperative structures. The (cooperative) learning experience in the community influenced the participants' attitudes by changing their behavioural framework. Learning to adapt to the frameworks created by the cooperative structures and the willingness and aspiration to engage and cooperate was a key factor in the change of attitude.

Our second question concerned the relevance and intentionality of reflective and self-analytical thinking.

How can we encourage students to reflect more consciously on the teacher-role (their own, constantly evolving image as a teacher) in addition to their own reflections as students?

The language used by the students was strongly influenced by the school-like approach (permission, obligation, compulsion), and the codes and student reflections also showed a strong sense of deflection and reference to external circumstances. Identification with the role of teacher was also mainly determined by conformity to external expectations. The students experienced self-acceptance as a challenge, which was mitigated by communication in micro-groups, providing a safe environment for personal engagement, self- and peer reflection. The teacher candidates experienced the typical manifestations of the teacher role, such as speaking in front of others, as being stressful. Students' reflections on their use of a foreign language emphasised the task-oriented nature and the desire to overcome language anxiety, often voicing their frustration, and seeing foreign language learning as an end rather than a means of communication/learning.

Interventions: the supportive environment created in the micro-groups had a positive impact on individuals' self-confidence through acceptance and the strengthening of interpersonal relationships. The partnership established between instructors and students allowed for a regular review of our reactions and ad-hoc decisions as teachers, as well as a meta-level reflection of students' emotionally-based and critical comments.

Our third question focused on the role of reflections in professional development.

How can we promote a more conscious use of student reflections in order to support their own professional development?

The intended effects of the action research interventions were manifested in a shift in the student-viewpoints, in the formation of a (professional) self-image based on self-awareness as reflected by others, in raising the difficulty of taking responsibility and self-acceptance to a reflective level, and in the activation of certain areas of emotional intelligence and an increase in social openness.

7. SUMMARY

In the strategic type of action research process, reflective and collaborative work has outlined the interventions needed to make teacher education more effective and the results can be used to make the collaboration between actors of public and higher education more effective (Vida, 2019). From the perspective of the student teachers action research may become “a tool for the synthesis of the research-based training paradigm and the practice-based training in teacher education” (Csíkos, 2020:19). Action research as a process supporting individual teacher/researcher development (professionalisation) also represents a professional responsibility to improve the practice of teacher education. We have found that the action-based model we have created is well adaptable to the development of a professional dialogue based on mutual respect, acceptance and openness, and thus it is also suitable for protecting the psychological immune system of teachers/instructors. Along with the action-based nature of the model and the involvement of teacher candidates in the process, another focus of our proposal is the practice of collegial reflection as part of the multi-teacher model, supporting researcher introspection (constructive criticism, raising new perspectives). Teacher collaboration in action research opened up multiple levels of reflection allowing the researcher to explore the connections between different contexts (institutional setting, classroom competence development, shared construction of knowledge, research methods). The novelty of this dissertation is in its extension of the practical methodology and broadening of the theoretical base of teacher preparation:

- It presents a comprehensive overview of the possible contexts of action research and its practical applications in education.
- It demonstrates the implementation of the multi-contextual model of action research in practice.
- Action research is embedded in the context of the Pécs 'Think Tank of Education' and interpreted as the realization of the cooperative paradigm.
- It offers innovative approaches to research methodology: it applies the Grounded Theory coding procedure to fragmented texts, and uses the Psychological Immune Competence Inventory for both input and output measurement.
- It presents the application of the combined paradigm (including embedded analysis) in the context of a specific action research project.
- It attaches particular importance to the researcher's position, its definition and interpretation in the light of the qualitative criteria of action research.
- It presents a working model and lessons learned from an implemented teacher collaboration.
- It is expected to contribute to a more subtle understanding of student reflectivity as a central factor in teacher education.
- It constructs and describes an action-based reflective-cooperative model for teacher training that can be adapted to educational contexts other than the one in our study.

8. REFERENCES

- Bodorkós, B. (2010). *Társadalmi részvétel a fenntartható vidékfejlesztésben: a részvételi akciókutatás lehetőségei*. Doktori (PhD) értekezés. Szent István Egyetem, Gödöllő.
- Csíkos, Cs. (2020) Akciókutatások és pedagógiai kísérletek párhuzamai és különbözőségei. *In Neveléstudomány*, 8(4), 12-20. DOI: 10.21549/NTNY.31.2020.4.1
- Csillag, S. (2016). A kooperatív akciókutatás elmélete és gyakorlata. *Prosperitas*, 3(2), 36–62.
- Dudás, M. (2007). Tanárjelöltek belépő nézeteinek feltárása. In Falus Iván (Ed.), *A tanárrá válás folyamata* (pp. 46-120). Budapest: Gondolat Kiadó.
- Falus, I. (2002). A tanuló tanár. *Iskolakultúra*, 12(6-7), 76-80.
- Falus, I. (2006). *A tanári tevékenység és a pedagógusképzés új útja*. Budapest: Gondolat Kiadó.
- Forrai, M. (2011). *Az érzelmi intelligenciának, a megküzdő-képességnek és a családi háttér szerepének vizsgálata és a tanulmányi eredményességgel történő összehasonlítása a különböző típusú iskolákban tanuló serdülő diákok körében*. Doktori (PhD) értekezés. Pécsi Tudományegyetem Pszichológia Doktori Iskola
- Grasselli, N. I. (2009). Lehet-e akciókutatásból doktorálni? Eszményképek kontra valóság. *Vezetéstudomány*, 40(4), 45-63. <https://doi.org/10.14232/ISKKULT.2020.9.45>
- Gyészli, E. & Sántha, K. (2015). Abdukció az osztálytermi interakcióban. *Iskolakultúra*, 25(12), 19-27.
- Hercz, M. (2016). Narratívák, mint a pedagógusjelöltek szakmai szocializációjának indikátorai. In Reményi, A. Á, Sárdi, Cs. & Tóth, Zs. (Eds.), *Távlatok a mai magyar alkalmazott nyelvészetben* (pp. 88-100). Budapest: Tinta Könyvkiadó.
- Kimmel, M. (2007). A tanárképzés problémái konstruktivista értelmezési keretben. In Falus, I. (Ed.), *A tanárrá válás folyamata*. (pp. 11-45). Budapest: Gondolat Kiadó.
- Kocsis, J. N. (2016). A pszichológiai immunkompetencia aktuális szintjeinek összefüggései az értékpreferenciákkal pedagógusjelölt hallgatók körében. In Karlovitz, J. T. (Ed.), *Tanulás és fejlődés*, (pp. 14-23). <http://www.irisro.org/pedagogia2016konfket/13KocsisJuditNora.pdf> (Utolsó letöltés: 2023. 05. 05.)
- Kocsis, M. (2015). *A bemeneti kompetenciák vizsgálata pedagógusjelölt hallgatók körében*. Pécs: Pécsi Tudományegyetem.
- Levin, M. (2012). Academic Integrity in Action Research. *Action Research*, 10(2), 133–149. DOI: 10.1177/1476750312445034
- Málovics, Gy. (2019). Tudás létrehozása társadalmi hatással karöltve: a részvételi akciókutatás (RAK) megközelítése. *Magyar Tudomány* 180(8), 1147–1157. DOI: 10.1556/2065.180.2019.8.5
- Mitev, A. (2015). A kvalitatív kutatás filozófiája és a kvalitatív kutatási terv. In Horváth, D. & Mitev, A. (Eds.), *Alternatív kvalitatív kutatási kézikönyv* (pp. 25-81). Budapest: Alinea Kiadó.

Mrázik, J. (2019b). A felsőoktató szakmai fejlesztése: egy megvalósult együttműködési modell metareflexiója. In Arató, F. (Eds.), *Áttekintés. Válogatás a pécsi neveléstudományi műhely munkáiból.* (pp. 215-225) *Autonómia és Felelősség Tanulmánykötetek V.* Pécs: PTE BTK NTI.

Sántha, K. (2015). *Trianguláció a pedagógiai kutatásban.* Budapest: Eötvös József Könyvkiadó.

Sántha, K. (2022). *Kvalitatív tartalomelemzés.* Budapest: Eötvös József Könyvkiadó.

Somogyi, K., Birtalan, I. L., Einspach-Tisza, K., Jantek, Gy., Kassai, Sz., Karsai, Sz., Sebestyén, E., Dúll, A., & Rácz, J. (2018). Mi történik egy kvalitatív módszertan doktori szemináriumon? A GT- és IPA- elemzés menete. *Alkalmazott Pszichológia, 18(2).* 105–127. doi: 10.17627/ALKPSZICH.2018.2.105

Szalmási, J. (Ed.), (2013). *Modellek a geoinformatikában.* Tankönyv, v1.0, TÁMOP 4.1.2.A/1-11/1 SZTE Természeti Földrajzi és Geoinformatikai Tanszék.

Szivák, J. (2002). *A pedagógusok gondolkodásának kutatási módszerei.* Budapest: Műszaki Könyvkiadó/Pedagógus Könyvek.

Vida, G. (2019). *Az akció alapú kutatás lehetőségei a képességvizsgálatban.* XIX. Országos Neveléstudományi Konferencia. Pécs, Absztraktkötet 186. oldal

Zank, I. (2021). Az akciókutatás értelmezése a pedagógiai gyakorlatban és a tanárképzésben. In Arató, F. (Ed.), *Autonómia és Felelősség 5(1-4),* 55-71.

9. SCHOLARLY ACTIVITY OF THE AUTHOR

9.1 Conference presentations on the dissertation topic

Az akciókutatás értelmezése, módszertana és illeszkedése a Pro-ME-ToM projekthez. XXII. Országos Neveléstudományi Konferencia. ELTE Pedagógiai és Pszichológiai Kar, Budapest. 2023. október 26-28. (elfogadott szimpóziumelőadás)

A beágyazott elemzés relevanciája hallgatói énkép vizsgálata során. HuCer - Hungarian Conference on Educational Research. Az oktatás határdimenziói. ELTE Savaria Egyetemi Központ, Szombathely. 2023. május 26-27.

Beágyazott modell, mint akciókutatásban alkalmazott triangulációs módszer. XXII. Országos Neveléstudományi Konferencia, Pécs. 2022. november 17-19.

Collaboration and innovative partnership in teacher education – lessons of an action research. Teacher Training in Europe – Challenges, problems and solutions. Freiburg, Germany. 2022. június 24-25. szekcióelőadás és szekcióvezetés

A tanárjelöltek énképe – a közösségben zajló tanulás hatásainak vizsgálata kombinált paradigma (mixed methods) alapján. HuCer - Hungarian Conference on Educational Research. Budapest Műszaki és Gazdaságtudományi Egyetemen. 2022. május 26-27.

„Az Én való világom vagy a Tiéd?” - meta-perspektívák a neveléstudományi akciókutatásban. XXI. Országos Neveléstudományi Konferencia, Szeged. 2021. nov. 18-20.

Akciókutatás a pedagógiai gyakorlatban és a tanárképzésben. Autonómia és Felelősség műhelykonferencia az Autonómia és Felelősség folyóirat szerkesztőség és az MTA PAB Pedagógiai Munkabizottsága közös szervezésében. Pécs. 2020. november. 12.

Az abdukció szerepe az akciókutatás minőségi kritériumainak megvalósításában. XX. Országos Neveléstudományi Konferencia, Debrecen. 2020. nov. 5-7. szimpózium előadás

A tanulásszervezés lehetséges hatása a tanárjelöltek pszichológiai immunkompetenciájára. HuCER- Hungarian Conference on Educational Research (távkonferencia) 2020. május 27-29.

Action Research as a Space for Dialogue and Collaboration in Teacher Training. XIX. Országos Neveléstudományi Konferencia, Pécs. 2019. nov. 7-9. angol nyelvű szekció előadás

Dialógus és reflexió az akciókutatásban. XIX. Országos Neveléstudományi Konferencia, Pécs. 2019. nov. 7-9. magyar nyelvű szimpózium előadás

A kollaboráció és kooperáció színterei a tanárképzésben. XVIII. Országos Neveléstudományi Konferencia, ELTE PPK Budapest. 2018.nov. 8-10.

Towards Innovation in Teacher Training: Reflective-Co-operative Teacher Competence Development Embedded in Action Research. „Research, Innovation and Reform in Education”, XI. International Congress of Educational Research (ICER) Pedagogical University of Cracow, Krakkó, Lengyelország. 2018. szept. 17-19. – angol nyelvű szekció előadás és szekcióvezetés

A ráfordítás és megtérülés indikátorai a neveléstudományi akciókutatásban. HuCER- Hungarian Conference on Educational Research. Kodolányi János Főiskola, Székesfehérvár. 2018. május 24-25.

Részvételi akciókutatás a tanárképzésben, mint a befogadás eszköze. Horizontok és dialógusok IV. Neveléstudományi Konferencia. PTE BTK. Pécs. 2018. május 9-12.

Transversal Skills Development in Teacher Training. XVII. Országos Neveléstudományi Konferencia, Nyíregyháza. 2017. nov. 9-11. angol nyelvű tematikus előadás

A reflektivitás kontextusai: akció-alapú, modell a tanárképzésben. XVII. Országos Neveléstudományi Konferencia, Nyíregyháza. 2017. nov. 9-11. szimpózium előadás

A felsőoktatási kompetencia fejlesztés és a szaknyelvi készségfejlesztés összekapcsolása akciókutatás keretében. HuCER- Hungarian Conference on Educational Research. ELTE Pedagógiai és Pszichológiai Kar Budapest. 2017. május 25-26.

Theory and practice: action research adapted to teacher training. HuCER- Hungarian Conference on Educational Research. ELTE Pedagógiai és Pszichológiai Kar Budapest. 2017. május 25-26. angol nyelvű konferencia poszter

Akció-alapú, reflektív, kooperatív tanulás-szervezésbe ágyazott felsőoktatási kompetenciafejlesztés – különös tekintettel az idegennyelvi készségekre. Horizontok és dialógusok III. Neveléstudományi Konferencia. PTE BTK. Pécs. 2017. május 10-11.

9.2 Conference presentations on other topics

Kvalitatív hálózatelemzés a tanárjelöltek szakmai énképének vizsgálatában. XXII. Országos Neveléstudományi Konferencia. ELTE Pedagógiai és Pszichológiai Kar, Budapest. 2023. október 26-28. (elfogadott szimpóziumelőadás)

Kutatói szerepek. Kvalitatív és kevert módszertani konferencia. Kvalitatív és Kevert Módszertani Kutatások Központja Pécs. 2023. június 09.

Én-központú hálózatok elemzése a tanítási tevékenységről való vélekedés aspektusából. HuCer - Hungarian Conference on Educational Research. Az oktatás határdimenziói. ELTE Savaria Egyetemi Központ, Szombathely. 2023. május 26-27. Társelőadó: Dr. Mrázik Julianna

Akciókutatás és kevert kvalitatív paradigma. Kvalitatív és kevert módszertani konferencia – Előadás és interaktív workshop vezetése. Kvalitatív és Kevert Módszertani Kutatások Központja Pécs. 2022. június 10. Társelőadó: Dr. Vida Gergő SOE PBK

A befogadó szemlélet gyakorlati megvalósítása egy angol nyelvű pedagógia BA programban: „Interkulturális pedagógiai asszisztens” képzés a Pécsi Tudományegyetemen. Képzés és gyakorlat konferencia, Kaposvár. 2021. szept. 2-4. Társelőadó: Dr. Dezső Renáta Anna

Realisation of Inclusive Excellence via a Bachelor Programme in Pedagogy: "Intercultural Educational Assistant" at the University of Pécs. International Conference on Inclusive Excellence and Inclusive Universities, University of Pécs. 2021. jún. 10-11. Co-presenter: Dr. Dezső Renáta Anna

Just do it! - a pedagógusok attitűdjének feltérképezése a lemorzsolódás aspektusából. HuCer - Hungarian Conference on Educational Research. Prevenció, intervenció és kompenzáció – Korszerű neveléstudományi módszerekkel a korai iskolaelhagyás ellen. Eszterházy Károly Egyetem, Eger. 2019. május 23-24

Benefits of Discussion in a Culturally Diverse Classroom. Pécs, Horizontok és dialógusok V. neveléstudományi konferencia. PTE BTK Pécs. 2019. május 8-10. - angol nyelvű szekció előadás

Development of Professional Foreign Language Skills- English for Academic Purposes at Pécs University, Faculty of Humanities. Nyitrai Konstantín Filozófus Egyetem, Bölcsészettudományi Kar. Nyitra, Szlovákia. 2009. május 10. előadás angol nyelven.

Az idegennyelvi professzionális készségek fejlesztése a bölcsész- és társadalomtudományi képzésben a PTE BTK gyakorlata alapján. SZOKOE Szaknyelvoktatók és Kutatók Országos Egyesülete, Debrecen. 2008. november 21-22. Társelőadó: Jakabné dr Somogy Rozália

The Long Way from 'Frames and Steps' to Confident Communication at the Workplace. SZOKOE VII. Szaknyelvoktatási Szimpózium. Pécs. 2007. november 14-16. előadás angol nyelven

Communicating in a Changing Europe: English in day-to-day professional communication. Európai Szakképzési Kerekasztal Konferencia, Szeged. 2005. április 27-május 2. előadás angol nyelven

Hungary and the European Union: attitudes, expectations, concerns. The Louvain Institute for Ireland in Europe. Seminar for MA Students in European Integration. Leuven, Belgium. 2004. február. - előadás angol nyelven

Public Opinion in the New Europe. Limerick University, Jean Monnet Summer School of European Integration. Limerick, Írország. 2004. június 18. előadás angol nyelven.

Communicating in a Changing Europe – an English course in day-to-day professional communication with EU partners. A British Council által publikált oktatási anyag angol nyelvű bemutató prezentációja. Brit Nagykövetség, Budapest. 2004. december 2.

New Resources, New Directions: a Workshop on the Future of English in Europe. British Council Workshop, Budapest. 2004. december 3. - angol nyelvű workshop vezetése

Tudományos cikk alkalmazása egy másik diskurzusra: egy eredeti és egy átdolgozott szöveg összehasonlító elemzése. XI. Magyar Alkalmazott Nyelvészeti Kongresszus, Pécs. 2001. április 17-19. magyar nyelvű előadás

Transferability of Perceptive Skills: Listening and Reading. IRAAL – Irish Association for Applied Linguistics, nemzetközi alkalmazott nyelvészeti konferencia. Dublin, Írország. 1998. március. angol nyelvű előadás

9.3 Publications on the dissertation topic

Zank, I. (2021). A kutatói önmegfigyelés érvényessége és relevanciája a neveléstudományi akciókutatásban. In Maisch, P., Molnár-Kovács, Zs., Szabó, H. P. (Eds), *Iskola a társadalmi térben és időben VIII.* (pp. 269-302). Pécs: PTE BTK „Oktatás és Társadalom” Neveléstudományi Doktori Iskola.

Zank, I. (2021). Az akciókutatás értelmezése a pedagógiai gyakorlatban és a tanárképzésben. In Arató, F. (Ed.), *Autonómia és Felelősség* 5(1-4), 55-71.

Zank, I. (2020). Diary of an Action Research: Creating Space for Dialogue, Reflection and Collaboration in Teacher Training. In Madalinska-Michalak, J. (Ed.), *Studies on Quality Teachers and Quality In-service Teacher Education*. (pp. 108-124). Warsaw: TEPE Network Teacher Education Policy in Europe. FRSE Publications.

Zank, I. (2020). Action research in teacher education: re-framing experience and co-producing knowledge. In Varga, A., Andl, H., Molnár-Kovács, Zs. (Eds.), *Current Research in Educational Sciences 2019. Educational Sciences: Horizons and Dialogues. Volume II*. (pp. 55-65) Pécs: Scientific Committee of Pedagogy of the Hungarian Academy of Sciences and the Institute of Education Sciences, Faculty of Humanity and Social Sciences, University of Pécs.

Zank, I. (2020). Just Do It” – A pedagógusok attitűdjének feltérképezése a lemorzsolódás aspektusából – In Hideg, G., Simándi, Sz., Virág, I. (Eds.), *Prevenió, intervenció és kompenzáció. HERA Évkönyvek VII*. (pp. 29-39). Budapest: Magyar Nevelés- és Oktatáskutatók Egyesülete.

Zank, I. (2019). A részvételi akciókutatás elmélete és gyakorlata néhány magyarországi romakutatás tükrében. In Juhász, E. & Endrődy, O. (Eds), *Oktatás, gazdaság, társadalom. HERA Évkönyvek VI*. (pp. 633- 644). Budapest: Magyar Nevelés- és Oktatáskutatók Egyesülete.

Zank, I. (2018). Akciókutatásba ágyazott, reflektív-kooperatív tanárikompetencia-fejlesztés In: Endrődy-Nagy, O. & Fehérvári, A. (Eds.), *Innováció, kutatás, pedagógusok. HERA Évkönyvek V*. (pp. 163-174). Budapest: Magyar Nevelés- és Oktatáskutatók Egyesülete.

9.4 Publications on other topics

Zank, I. (2019). „Just Do It!” Képzés és reflexió a köznevelés módszertani megújítása a végzettség nélküli iskolaelhagyás csökkentése kapcsán. Tanulmány a rövid idejű képzések záróértékelése témájában az EFOP-3.1.2-16-2016-00001 „A köznevelés módszertani megújítása a végzettség nélküli iskolaelhagyás csökkentése céljából” című projekt keretében.

Zank, I. - Baros-Tóth, Á. (2015). Az osztatlan tanárképzésben részt vevő hallgatók idegen nyelvi igényeinek felmérése a PTE Bölcsészettudományi Karán. Tanulmány a TÁMOP-4.1.2.B.2-13/1-2013-0014 „Pedagógusképzést segítő hálózatok továbbfejlesztése a Dél-Dunántúl régióban” című pályázat keretében. Pécs.

Zank, I., Baros-Tóth, Á., Winternitz, É. (2015). Modulos, többszintű szaknyelvoktatási rendszer kialakítása a PTE-n. Tanulmány a TÁMOP-4.1.2.D-12/1/KONV-2012-0010 „Idegen nyelvi képzési rendszer fejlesztése a Pécsi Tudományegyetemen” című pályázat keretében.

Zank, I., Jakabné Dr. Somogyi, R. (2009). Az idegennyelvi professzionális készségek fejlesztése a bölcsész- és társadalomtudományi képzésben a PTE BTK gyakorlata alapján. In

Silye. M. (Ed.), *Porta Lingua 2009 Szaktudás idegen nyelven*. (pp. 45-53). Debrecen: Szaknyelvoktatók- és Kutatók Országos Egyesülete.

Zank, I., Barta É., Bierbauer Zs., Laczkóné Rácz E., Szalayné Pókay M., Széky A. (2004). *Communicating in a Changing Europe – A resource for language teachers*. Editors: Zank, I., and Tribble, C. Budapest: British Council Hungary. (angol nyelvű oktatás anyag egyetemi hallgatók részére - megjelent CD-n)

Zank, I. (2003). Könyvrecenzió: Alicia Betsy Edwards: *The Practice of Court Interpreting*. John Benjamins Publishing Company, 1995. 192 pp. In Klaudy Kinga (Ed.) *Fordítástudomány* 9. V. évf., 1. szám. 109-117.

Zank, I. (2002). Adaption of a Research Article to a Different Discourse: a Comparative Analysis of Two Texts. In Fóris Á., Kárpáti E., Szűcs T. (Eds.), *A nyelv nevelő szerepe. Szaknyelvek és oktatásuk*. A XI. Magyar Alkalmazott Nyelvészeti Kongresszus előadásainak válogatott gyűjteménye. (pp 430-437). Pécs: Lingua Franca Csoport.

Zank, I. (2001). Könyvrecenzió: Hatim, Basil és Mason, Ian: *Discourse and the Translator*. Longman, 1992. 258 pp. In Klaudy Kinga (Ed.) *Fordítástudomány* 5. III. évf., 1. szám. 113-117.

Zank, I. – Noble, H. (Eds.) (1999). *Towards quality assurance in tertiary education for specialists of other discipline*. A Service English Project felsőoktatási szaknyelvi vizsga dokumentációját tartalmazó kiadvány. Budapest: British Council.

Zank, I. (1996). Do We Need an EAP Course - Needs and Constraints Analysis for an English for Academic Purposes Course. In Deák, P. (Ed.). *Tanulmányok a szaknyelvi oktatás és vizsgáztatás fejlesztéséről*. (pp. 6-16). Pécs: JPTE.

Zank, I. – Dorn, K. (1996). Whys and Hows of a Listening Course. In Deák, P. (Ed.). *Tanulmányok a szaknyelvi oktatás és vizsgáztatás fejlesztéséről*. (pp. 73-86). Pécs: JPTE.