

Professional characteristics of scientific activities and achieved results doc. PhDr. Tomáš Janík, Ph.D., M.Ed.

If the world is developing towards knowledge society, teaching activities in their broadest sense constitute the cornerstone that social profit relies upon.

No other profession is acquainted so closely with the processes during which information is transformed into knowledge.

Social reflection together with the interplay of social and political powers will be essential to determine whether the particular ideas will serve as a basis for drawing conclusions adequate for school and education.

Jiří Kotásek

Introduction: On educational research and its use in educational policy

The aim of the following paragraphs is to introduce research areas I have focused on in my professional life with much appreciated support of a number of colleagues, and to review their state-of-the-art in both national and international context, all that in the light of my own results in particular.

In the last 15 years I have had the opportunity to not only conduct my own research but also to utilise its outcomes in order to participate in the debate on educational policies at various levels. Therefore this text is going to be structured as follows: firstly, I will introduce the issues my research has concentrated on in three wider areas (teaching and learning, curriculum, and the teaching profession); then I will outline some of my attempts to influence the educational (curricular in particular) policies.

In the text, special attention is paid to my foreign/international activities as I have considered them vital, not only in terms of the way they have benefited my professional growth and inter-institutional cooperation, but also because due to this experience of being confronted with international partners I have never had a doubt that improvement is necessary in numerous areas.

1. Research area: Teaching and learning – employing a video-based methodology (video study)

For me and the team of colleagues at the *Educational Research Centre (CPI)*, later renamed as the *Institute for Research in School Education (IVŠV [IRSE])* of the Faculty of Education, Masaryk University in Brno (PdF MU), the teaching and learning processes in various school subjects at various levels and types of schools have been the focus of empirical research employing video-based methodology (*video study*) since 2004.

The first (pilot) project, the *Video study of physics*, was conducted in 2004. The team which I coordinated aimed to introduce and standardise a video-based methodology, to conduct video studies across school subjects at primary and secondary schools, and to attempt to utilise their outcomes within the ongoing curricular reform as well as in teacher education. In the year 2005, the *Video study of geography* commenced, followed by the *Video study of English* and *Video study of physical education* in 2007. Then came the *Video study of German* and *Video study of primary education*.

Between the years 2006–2010, video studies were part of the Ministry of Education, Youth and Sports of the CR project *LC06046 Research Centre on Schooling* which was carried out by two co-operating departments: the *CPV* of the Faculty of Education, Masaryk University (PdF MU) together with the *Institute for Research and Development in Education*, Faculty of Education, Charles University (with prof. PhDr. Eliška Walterová, CSc. as a principal investigator/co-ordinator at PedF UK, and doc. PhDr. Jiří Němec, Ph.D. as a principal investigator at PdF MU).

As a result of this research, there are numerous outputs in the form of expert publications, papers in journals and proceedings in Czech, English and German.

The outcomes of video studies are presented, for instance, in the following publications:

- Hübelová, D., Janík, T., & Najvar, P. (2008). Pohledy na výuku zeměpisu na 2. stupni základní školy: souhrnné výsledky CPV videostudie zeměpisu [The Geography instruction on the secondary school level: Results of the CPV video study of Geography]. *Orbis scholae*, 2(1), 53–72.
- Janík, T., Janíková, M., Najvar, P., & Najvarová, V. (2008). Pohledy na výuku fyziky na 2. stupni základní školy: souhrnné výsledky CPV videostudie fyziky [The Physics instruction on the secondary school level: Results of the CPV video study of Physics]. *Orbis scholae*, 2(1), 29–52.
- Janíková, M., Janík, T., & Valkounová, E. (2009). Vyučovací jednotky tělesné výchovy z hlediska organizačních forem a fází výuky [The structure of Physical Education modes of classroom organisation and lesson phases]. In V. Mužík & V. Süß (Eds.), *Tělesná výchova a sport mládeže v 21. století* (pp. 101–115). Brno: Masarykova univerzita.
- Najvarová, V., Najvar, P., & Janík, T. (2011). Procesy výuky a příležitosti k učení na 1. a 2. stupni [Processes of teaching and opportunities to learn on the primary and lower-secondary school level]. In E. Walterová, et al., *Dva světy základní školy? Úskalí přechodu z 1. na 2. stupeň* (pp. 137–161). Praha: Karolinum.

Methodological issues related to video studies are reflected in the following publications:

- Miková, M., & Janík, T. (2007). Pořizování videozáznamu jako metoda sběru dat [Video recording as a method of data collection]. In R. Švaříček & K. Šedová, et al., *Kvalitativní výzkum v pedagogických vědách: pravidla hry* (pp. 192–201). Praha: Portál.
- Najvar, P., & Janík, T. (2008). Videostudie ve výzkumu vyučování a učení [Video study in investigating teaching and learning in the classroom]. *Orbis scholae*, 2(1), 7–28.
- Janíková, M., & Janík, T. (2009). Videostudie v edukačním výzkumu [Video study in educational research]. In Š. Švec, et al., *Metodologie věd o výchově: kvantitativně-scientistické a kvalitativně-humanitní přístupy v edukačním výzkumu* (pp. 101–111). Brno: Paido.

Overviews of the issues are provided in the following monographs:

- Janík, T., & Miková, M. (2006). *Videostudie: Výzkum výuky založený na analýze videozáznamů* [Video study: Research on instruction based on video recordings]. Brno: Paido.
- Najvar, P., Najvarová, V., Janík, T., & Šebestová, S. (2011). *Videostudie v pedagogickém výzkumu* [Video study in educational research]. Brno: Paido.

A publication in English, a monograph called *The power of video studies in investigating teaching and learning in the classroom*, was prepared for the international research community. Leading experts in video studies and their utilisation in educational research were invited to contribute to the monograph. The importance of the publication to the international community is substantiated with being widely read (approx. 300 perusals recorded on Research Gate) as well as cited (approx. 40 citations and responses recorded).

- Janík, T., & Seidel, T. et al. (2009). *The power of video studies in investigating teaching and learning in the classroom*. Münster: Waxmann.

Since video studies were conducted in cooperation and mutual inspiration with international partners (especially the *Leibnitz Institute for Science and Mathematics Education* at Kiel

University in Germany), some outputs were also published in German¹ - e.g.:

Janík, T., Miková, M., Najvar, P., & Najvarová, V. (2006). Unterrichtsformen und -phasen im tschechischen Physikunterricht: Design und Ergebnisse der CPV Videostudie Physik. *Zeitschrift für Didaktik der Naturwissenschaften*, 12(1), 219–238.

Janík, T., Najvarová, V., & Janík, M. (2014). Zum Einsatz didaktischer Medien und Mittel: Ergebnisse einer videobasierten Studie. In P. Knecht, E. Matthes, S. Schütze, & B. Aamotsbakke, et al., *Methodologie und Methoden der Schulbuch- und Lehrmittelforschung* (pp. 289–302). Bad Heilbrunn: Verlag Julius Klinkhardt.

Research based on the analysis of video recordings of lessons was later elaborated on in the GA ČR P407/11/0262 project *Quality of Curriculum and Instruction in School Education*, of which I was a principal investigator between 2011–2013. Relatively original methodology was developed in this project – a *content-based approach to analysing and improving instruction*. The project was based on an analysis of problems in school education which were identified in Czech educational research in 2001–2008². As it transpired, a number of the problems were related to the quality of curriculum and instruction. The two concepts had always been mentioned predominantly in political slogans, however, they had not yet been elaborated on in order to be established as scientific constructs. Therefore the project aimed to introduce the concepts quality of curriculum and instruction as theoretical constructs to the professional research community in the Czech Republic, to develop instruments for their empirical research, and to carry out a series of research studies on the aspects of quality of curriculum and instruction in different school subjects. Three methodological principles were applied: (i) systematic approach – the quality of curriculum and instruction was examined in the wider contexts of the school quality as well as the quality of educational system, (ii) content-process-oriented approach – the quality of curriculum and instruction was tackled with regard to particular content and its sequencing, (iii) connecting the domain-specific and the domain-general perspectives – the quality of curriculum and instruction was investigated from the perspectives of subject-specific didactics (languages, maths and science, social sciences, aesthetics and sport). The added value of the project was the fact that having built on cross-curricular comparison, it aimed to achieve generalizations across the subjects concerned. That added value resulted in positive response and respect in the fields of subject-specific didactics as well as general didactics and educational science.

The methodological foundations of the content-based approach were compiled in the following monograph which was then awarded by the *Czech Educational Research Association* in 2014:

Janík, T., Slavík, J., Mužík, V., Trna, J., Janko, T., Lokajíčková, V., Minaříková, E., Lukavský, J., Sliacky, J., Šalamounová, Z., Šebestová, S., Vondrová, N., & Zlatníček, P. (2013). *Kvalita (ve) vzdělávání: obsahově zaměřený přístup ke zkoumání a zlepšování výuky [Quality in education: content focused approach to analysing and improving instruction]*. Brno: Masarykova univerzita.

As part of the project outcomes, the first dozen case studies were carried out together with the assistance of a wider community of authors from subject-specific didactics. In the case studies, a 3A methodology was employed (i.e. annotation-analysis-alteration of the teaching and learning situations). The case studies provided portraits of more or less successful teaching and learning together with substantiated suggestions for possible improvement in quality. As such, they provided an empirical basis for the subsequent generalisations. The theoretical and methodological foundations of this approach have been elaborated on in the following journal papers:

¹ Janík, T., Najvar, P., Najvarová, V., Trna, J., & Novák, P. (2012). Opportunities to learn in Physics instruction in the Czech Republic: Findings of the IRSE Video Study. *The New Educational Review*, 28(2), 102–114.

² Janík, T., Janíková, M., Janko, T., Knecht, P., Najvar, P., Najvarová, V., Šebestová, S., & Vlčková, K. (2009). *Kurikulum – výuka – školní klima – učitelské vzdělávání: Analýza nálezů českého pedagogického výzkumu (2001–2008) [Curriculum – teaching – school climate – teacher education: Analysis of findings of the Czech educational research (2001–2008)]*. Brno: MU.

Slavík, J., Janík, T., Jarníková, J., & Tupý, J. (2014). Zkoumání a rozvíjení kvality výuky v oborových didaktikách: metodika 3A mezi teorií a praxí [Analysing and improving instructional quality in subject matter didactics: 3A model between theory and practice]. *Pedagogická orientace*, 24(5), 721–752.

Slavík, J., Lukavský, J., Najvar, P., & Janík, T. (2015). Profesní soud o kvalitě výuky: předem a následně strukturovaná reflexe [Professional judgments on quality of teaching: Prospectively and retrospectively structured reflection]. *Pedagogika*, 65(1), 5–33.

Our work was further elaborated on in the project GA14-06480S *Producing pedagogical knowledge for improvement: Altering teaching situations for the better* which was carried out at IRSE between the years 2014–2016 with doc. PaedDr. Jan Slavík, CSc. as its principal investigator. It resulted in launching an educational portal site *Didactica Viva* and in developing a concept of transdisciplinary didactics³. The project providing the background for it stemmed from the analyses of the character of pedagogical knowledge provided by educational research. It became apparent that the increasing amount of descriptive and explanatory knowledge in educational science was in contrast with the lack of knowledge for change and knowledge for improvement that was essential for fulfilling the ambition to deal with problems in school education, i.e. to improve teaching and learning. The project was in line with the content-based approach to studying and improving teaching and learning processes, and it aimed to produce pedagogical knowledge for improvement by identifying, analysing, assessing, and suggesting alterations to teaching situations relevant for productive culture of teaching and learning across school subjects (languages, maths, science, social science, and aesthetics). That became the foundation for generalising the findings across the teaching situations. These aims were achieved by cooperating within professional communities composed of experienced teachers and researchers – usually subject-specific methodologists, pedagogues and psychologists from faculties preparing teachers professionally. Within these communities, video sequences of teaching situations were (and still have been) annotated, analysed and altered with the support of our e-learning environment (DiViWeb). These teaching situations were then worked on as instructional case studies and published so as to be further shared and discussed within the professional community in order to develop instructional knowledge for change and knowledge for improvement.

The concept of transdisciplinary didactics representing the methodological foundation for the activities mentioned above is introduced in the following book:

Slavík, J., Janík, T., Najvar, P., & Knecht, P. (2017). *Transdisciplinární didaktika: o učitelském sdílení znalostí a zvyšování kvality výuky napříč obory* [Transdisciplinary didactics: on teachers' sharing knowledge and improving instructional quality across disciplines]. Brno: Masarykova univerzita.

Other dozens of instructional case studies have been continuously published in journals focused on teaching practice as well as on DiViWeb. Due to them the characteristics of quality (or non-quality) of teaching were possible to be identified and described in greater detail. The *low-didactic-quality* of teaching was found out to possess features of didactic formalism such as: alienated learning, obscured learning, overloaded learning, mislead learning, incomplete learning, etc. On the other hand, the *high-didactic-quality teaching* and therefore *didactic excellence* was characterised by: constructing learning, cognitive activating learning and such. These features of high/low-didactic-quality teaching are described in Chapter 4 of the

³ In parallel with and as a follow-up, a review monograph was compiled by the Accreditation Commission working group for subject didactics, this monograph has played a vital part in current attempts to conceptualise subject-matter didactics as relatively autonomous disciplines having a key role in teacher education: Stuchlíková, I., Janík, T., Beneš, Z., Bílek, M., Brücknerová, K., Černochová, M., Čížková, V., Čtrnáctová, H., Dvořák, L., Dyrťová, K., Gracová, B., Hník, O., Kekule, M., Kostková, K., Kubiátko, M., Nedělka, M., Novotná, J., Papáček, M., Petr, J., Pišová, M., Řezníčková, D., Slavík, J., Staněk, A., Šmejkalová, M., Tichá, M., Valenta, J., Vaniček, J., Vondrová, N., Závodská, R., & Žák, V. (2015). *Oborové didaktiky: vývoj – stav – perspektivy*. [Field didactics: development – state of the art – perspectives]. Brno: Masarykova univerzita. The monograph was awarded the University of South Bohemia Rector's Award as well as the Czech Educational Research Association Award in 2016.

publication mentioned above, *Transdisciplinary didactics: on teachers' sharing knowledge and improving instructional quality across disciplines*.

The outcomes of both these projects were presented at international conferences where the feedback was rather accepting. The first publications on this topic in English and German were soon to follow. Our approach was presented in German in the form of a chapter (8) in the monograph cited below, and in English as a journal paper:

Janík, T. (2016). *Aktuelle Entwicklungen im Bildungsbereich in der Tschechischen Republik: Curriculum – Unterricht – Lehrerbildung*. Münster: Waxmann.

Slavík, J., Janík, T., & Najvar, P. (2016). Producing knowledge for improvement: the 3A procedure as a tool for research on teaching and learning. *Pedagogika*, 66(6), 672–688.

I have also presented the depicted approach to my international colleagues – e.g. during my *visiting professorship* at the University of Klagenfurt in May 2015 among others.

2. Research area: Curriculum – didactic transformation of content – curricular reform

The issue that had attracted my attention most in the wide array of topics and challenges of school education that arose from the video studies we conducted together with other research was the way teachers utilise the educational content in their lessons, in other words how the *educational content* transforms into *curriculum*. Being confronted with this question, I was drawn to the works of L. S. Shulman and his concept of *pedagogical content knowledge* (translated as *didaktické znalosti obsahu* in the Czech professional research community) at the beginning of my professional career:

Janík, T. (2004). Význam Shulmanovy teorie pedagogických znalostí pro oborové didaktiky a pro vzdělávání učitelů [The importance of Shulman's theory of pedagogical knowledge for subject didactics and teacher education]. *Pedagogika*, 54(3), 243–250.

I tackled that issue in my post-doctoral project *GA ČR 406/06/0246 Pedagogical content knowledge as a key issue in curricular reform* between the years 2006–2008. It transpired that the concept of *pedagogical content knowledge* accommodates the specifics of pedagogical interpretations of curricula in various subjects. What is particularly significant is the two-dimensionality of this knowledge reflected in the fact that a teacher bears in mind accurate subject-matter on the one hand and, at the same time, takes students' particular educational potentials into account. The challenge of balancing out these two dimensions led me to the question of how a teacher works their way to their sensitivity towards students' needs in the process of content construction and development. Working one's way towards such sensitivity requires the ability to analyse the connection between *educational content* on the one hand and *student's knowledge* on another. The following monograph summarises the findings of the project:

Janík, T. (2009). *Didaktické znalosti obsahu a jejich význam pro oborové didaktiky, tvorbu kurikula a učitelské vzdělávání* [Pedagogical content knowledge and its implications for subject didactics, curriculum development and teacher education]. Brno: Paido.

The following papers and numerous conference presentations – e.g. in Geneva, Innsbruck and Vienna – were aimed at the international research community:

Janík, T., Najvar, P., Slavík, J., & Trna, J. (2009). On the dynamic nature of physics teachers pedagogical content knowledge. *Orbis scholae*, 3(2), 47–62.

Janík, T., & Knecht, P. (2009). Zur Entwicklung des fachdidaktischen Wissens in der LehrerInnenbildung: Möglichkeiten und Grenzen nach dem Bologna-Prozess. In Pädagogische Hochschule Wien (Ed.), *Neue Architekturen im europäischen Hochschulraum – New architectures in the European higher education area* (pp. 169–173). Wien: LIT Verlag.

The follow-up analyses of that issue were part and parcel of the subsequent projects carried out in broader teams with prof. PhDr. Josef Maňák, CSc. as their principal investigator: *GA ČR 406/06/0246 The content dimension of basic school curriculum (2005–2007)* and the above-mentioned *Research Centre on Schooling* project (2006–2011). Both projects conducted research into curriculum in all its dimensions, levels and aspects. My habilitation thesis also fell into the area of curriculum research as I was seeking the answer to the question of what is the route taken by a learner accompanied by a teacher at school in order to transform what is taught into their knowledge. In my habilitation thesis, both types of pedagogical dimensions (i.e. ontodidactic a psychodidactic) were presented as they had established themselves rather successfully in the national professional discourse in the meantime. The habilitation thesis was published as part of the following book:

Janík, T., Maňák, J., & Knecht, P. (2009). *Cíle a obsahy školního vzdělávání a metodologie jejich utváření [Aims and contents of schooling and its designing]*. Brno: Paido.

In broader context, our activities at that time concentrated on the issue of curricular reform implemented in the Czech Republic at the turn of the millennium. Not least due to that the curricular reform became the focal point of our research endeavours. In 2009, the Institute for Education Research, Prague, turned to our Institute with an offer to carry out all-over research into the curricular reform at Czech grammar schools. This research was conducted under my supervision as part of the *Curriculum G – Quality school research activity* project. The outcomes were published in the course of the project in the following five research reports which have acquired response not only in the area of educational and curricular policy but also amongst the school directors and teachers in the field:

Janík, T., Knecht, P., Najvar, P., Pavlas, T., Slavík, J., & Solnička, D. (2010). *Kurikulární reforma na gymnáziích v rozhovorech s koordinátory pilotních a partnerských škol [The curricular reform at grammar school: interviews with coordinators at pilot and partner schools]*. Praha: VÚP v Praze.

Janík, T., Janko, T., Knecht, P., Kubiátko, M., Najvar, P., Pavlas, T., Slavík, J., Solnička, D., & Vlčková, K. (2010). *Kurikulární reforma na gymnáziích: výsledky dotazníkového šetření [Curricular reform at grammar schools: questionnaire survey]*. Praha: VÚP v Praze.

Pířová, M., Kostková, K., Janík, T., Doulík, P., Hajdušková, L., Knecht, P., Lukavský, J., Najvar, P., Najvarová, V., Maňák, J., Pavlas, T., Slavík, J., Spurná, M., Stehlíková, N., Škoda, J., & Vlček, P. (2011). *Kurikulární reforma na gymnáziích: případové studie tvorby kurikula [Curricular reform at grammar schools: Case studies on curriculum development]*. Praha: VÚP v Praze.

Janík, T., Slavík, J., Najvar, P., Hajdušková, L., Hesová, A., Lukavský, J., Minaříková, E., Pířová, M., & Švecová, Z. (2011). *Kurikulární reforma na gymnáziích: od virtuálních hospitací k videostudiím [Curricular reform at grammar schools: from virtual observations to videostudies]*. Praha: NÚV.

Janík, T., Knecht, P., Kubiátko, M., Pavlas, T., Slavík, J., Solnička, D., & Vlček, P. (2011). *Kvalita školy a kurikula: od expertního šetření ke standardu kvality [The quality of school and curriculum: from expert survey towards standard of quality]*. Praha: NÚV.

The research into the curricular reform at grammar schools was followed up by cooperative research into the implementation of the curricular reform at vocational schools – this research was funded in the *Curriculum S – Support of the implementation of school educational programmes (SEP) into vocational education institutions* project. The outcomes are presented in the following research report:

Knecht, P., Šumavská, G., Bartošek, M., Dobešová, Z., Horská, V., Janík, T., & Novotná, J. (2011). *Moderní odborná škola. Názory učitelů pilotních škol na kurikulární reform [Modern vocational school: The opinions of pilot school teachers on curricular reform]*. Praha: NÚV.

As the outputs of the research show, the implementation of the curricular reform proves to be its main challenge – school directors and teachers often resist taking on the roles of curriculum developers and thus of implementing the concept of curricular decentralisation which was

originally intended to be the cornerstone of the reform. Furthermore, the research outcomes essentially enabled us to take part in broader discussion on the change of school (for the better) – it was also possible because the curricular reform lay at the heart of the discussion on the system of education as such at that time (around the year 2010). At that time, our research findings enabled us to enter into the area of educational policy – it was possible to formulate and present recommendations for further development – see the following publications:

Janík, T., Knecht, P., Najvar, P., Pišová, M., & Slavík, J. (2011). Kurikulární reforma na gymnáziích: výzkumná zjištění a doporučení [Curriculum reform at grammar schools: research findings and recommendations]. *Pedagogická orientace*, 21(4), 375–415.

Janík, T. (2013). Od reformy kurikula k produktivní kultuře vyučování a učení [From curricular reform towards productive culture of teaching and learning]. *Pedagogická orientace*, 23(5), 634–663.

Stemming from the outcomes of the above-mentioned research on curricular reform at grammar schools and vocational schools, we designed an application for a follow-up project GA ČR 15-05122S *Between acceptance and resistance: Teachers' perceptions of curricular changes 10 years into the reform implementation*. It was successful and since 2015, the project has been solved at IRSE with myself as a principal investigator – it focuses on basic-school teacher perceptions of the curricular reform. Amongst its first outputs there is the following paper:

Janík, T. (2016). Škola v pohybu aneb k problému výjezdu a rozjezdu z kruhového objezdu [School in motion: On the problem of exiting a roundabout]. In M. Strouhal & S. Štech, et al., *Vzdělání a dnešek. Pedagogické, filosofické, historické a sociální souvislosti* (pp. 164–179). Praha: Karolinum.

Our research findings work their way to international cognisance through the texts (chapters) published in the following book as well as in the form of conference presentations and solicited lectures at universities of, for example, Banská Bystrica, Vienna and Graz:

Janík, T. (2016). *Aktuelle Entwicklungen im Bildungsbereich in der Tschechischen Republik: Curriculum – Unterricht – Lehrerbildung*. Münster: Waxmann.

We have been trying continuously to utilise the findings of the research on instruction and curriculum in teacher training and the support of teaching profession in general (see chapter 3).

3. Research area: Teachers' pedagogical knowledge – teacher expertise – professional vision – teacher standards and career systems – teaching profession – teacher education

In parallel and cross-compliance with the research projects mentioned above, we also concentrated on the issue of teacher education at IRSE. As soon as in the academic year 2001/2002, when I enrolled in the Educational Sciences Department of PdF MU as a doctoral student, I had the opportunity to take part in the project *GA ČR 406/02/1247 Tacit pedagogical knowledge and the self-regulation of the process of its development* (2002–2004) with prof. PhDr. Vlastimil Švec, CSc. as its principal investigator and my supervisor at the same time. He invited me to participate in the interdisciplinary research on pedagogical knowledge.

During this project, I initially concentrated on the issue of *teachers' subjective theories*. As it transpired, that concept has the potential to enrich the discourse on the teaching profession and teacher training. I outlined the issue of *teachers' subjective theories*, including the approaches to their research as elaborated in international sources, in the following paper:

Janík, T. (2005). Zkoumání subjektivních teorií pomocí techniky strukturování konceptů (SLT) [Research on subjective theories using structuring concept technique (SLT)]. *Pedagogická revue*, 57(5), 477–496.

My own studies into teachers' and parents' subjective theories conducted between 2002–2004 suggested that contradictory constructs can actually coexist in subjective theories – see the paper:

Janík, T. (2005). Transmise versus konstrukce? Pedagogické dilema v subjektivních teoriích učitelů [Transmission versus construction? Pedagogical dilemma in teachers' subjective theories]. In V. Švec (Eds.), *Od implicitních teorií výuky k implicitním pedagogickým znalostem* (pp. 17–26). Brno: Paido.

Together with the research on subjective theories⁴, I continued to examine the issue of *pedagogical knowledge* which I focused on in my dissertation later published in print as a professional publication (having noted over a hundred citations since):

Janík, T. (2005). *Znalost jako klíčová kategorie učitelského vzdělávání [Knowledge as a key category in teacher education]*. Brno: Paido.

Our research proved that pre-service teachers demonstrate considerable deficiencies in the use of professional language when externalising their tacit knowledge. This finding led us to investigating the potential of particular approaches and instruments that might support the development of teachers' professional pedagogical reflection/thinking (incl. professional language).

We were provided an excellent opportunity to do so in the GA ČR project P407/11/0234 *Expert teacher: the nature of expertise and determinants of professional development in FLT perspective* (2011–2013) at PdF MU with doc. PhDr. Michaela Pišová, Ph.D., M.A as its principal investigator. This project aimed to contribute to the current state-of-the-art regarding quality in the teaching profession by means of research into the characteristics of expert teachers. In the first stage, a theoretical state-of-the-art review was done in order to provide the background to serve as a basis for developing, piloting and verifying the methods to identify expert teachers, as well as conducting research into them, bearing the context of the Czech cultural framework in mind. The research itself concentrated on deepening the knowledge of these characteristics. In the following stage, it focused on the determinants of expert-teacher professional development processes. The following monograph, is the output of the research:

Pišová, M., Najvar, P., Janík, T., Hanušová, S., Kostková, K., Janíková, V., Tůma, F., & Zerková, J. (2011). *Teorie a výzkum expertnosti v učitelské profesi [Theory and research of expertise in the teaching profession]*. Brno: Masarykova univerzita.

Another opportunity to work in this direction opened up with the GA ČR project 13-21961S *Exploring professional vision and its development through video-based analysis (from the perspective of teachers of English as a foreign language)* (2013–2015) with myself as its principal investigator. This project stemmed from the debate on teacher professionalization and education quality as it aimed to examine (and also to introduce to the Czech professional environment) a relatively new concept of teachers' professional vision. It was apparent that professional vision, linked to professional knowledge and professional action offers a possibility to re-conceptualize teacher professionalism. The research focused on EFL teachers and aimed to (a) describe the nature of professional vision of EFL teachers, (b) explore the influence of participation in a video club (collaborative video-based analysis) on teachers' professional vision and explore its acceptance among participating teachers, and (c) explore the relationship between professional vision, professional knowledge, and professional action. The outcomes presented in the publication mentioned below⁵ show that videoclubs not only have

⁴ Janík, T. (2007). Cilová orientace ve výuce fyziky: exkurz do subjektivních teorií učitelů [Goal orientation in physics instruction: teachers' subjective theories]. *Pedagogická orientace*, 18(1), 12–33. Janík, T., Janíková, M., Najvar, P., & Najvarová, V. (2008). Ziele und Orientierung im Physikunterricht: Einblicke in die Überzeugungen von tschechischen Physiklehrern. *Zeitschrift für Didaktik der Naturwissenschaften*, 14(1), 201–217.

⁵ A paper in a journal was published to present the outcomes to the international community: Minaříková, E., Pišová, M., Janík, T., & Uličná, K. (2015). Video clubs: EFL teachers' selective attention before and after. *Orbis scholae*, 9(2), 55–75; moreover, the following monograph chapters: Minaříková, E., Pišová, M., & Janík, T. (2015). Using video in teacher education: An example from the Czech Republic. In L. Orland-Barak & Ch. J. Craig, et al., *Advances in research on teaching – international teacher education: Promising pedagogies, Part B* (pp. 379–400). Emerald Group Publishing Limited; a Minaříková, E., Pišová, M., & Janík, T. (2016). Using VideoWeb in EFL teacher education: Do the benefits differ for teachers with and without previous teaching experience? In P. Haworth & C. Craig, et al., *Career trajectories of English language teachers* (pp. 129–140). Oxford: Symposium Books.

the potential to influence participants' professional vision and knowledge, but they are also positively received and appreciated:

Janík, T., Minaříková, E., Pířová, M., Uličná, K., & Janík, M. (2016). *Profesní vidění učitelů a jeho rozvíjení prostřednictvím videoklubů [Teachers' professional vision and its development through video clubs]*. Brno: Masarykova univerzita.

Our research focus on the issues of the teaching profession equipped us with expertise and led us subsequently to take part in some activities carried out at (inter)national levels. For example, we cooperated with the Czech School Inspectorate in terms of processing the data (assessing and interpreting the results) of the international comparative study TALIS – Teaching and Learning International Survey. We participated in compiling an analytical research report as well as conducting one of the in-depth studies:

Kašparová, V., Holečková, A., Hučín, J., Janík, T., Najvar, P., Pířová, M., Potužníková, E., Soukup, P., & Ševců, M. (2015). *Analytická zpráva z šetření TALIS 2013 [Analytic report from the TALIS 2013 survey]*. Praha: Česká školní inspekce.

Kašparová, V., Potužníková, E., & Janík, T. (2015). Subjektivně vnímaná zdatnost učitelů v kontextu jejich profesního vzdělávání: zjištění a výzvy z šetření TALIS 2013 [*Teachers' self-efficacy in the context of their professional development: Findings and challenges of TALIS 2013*]. *Pedagogická orientace*, 25(4), 528–556.

Another outstanding activity we participated in was the development of professional standard and career progression system for teachers. We carried out a comparative analysis of the approaches to teacher professional standard development where we critically opposed its version then asserted in this country:

Janík, T., Pířová, M., & Spilková, V. (2014). Standardy v učitelské profesi: zahraniční přístupy a pokus o jejich zhodnocení [Standards in the teaching profession: Foreign approaches and analysis of their effects]. *Orbis scholae*, 8(3), 133–158.

As I continued to work on the career progression system for teachers in cooperation with a larger team, we also contributed to the currently proposed teacher professional standard (it has not been published yet – it is prepared for being entered into public debate). We have also prepared the supporting documentation to serve as a basis for another component of the career progression system – novice teachers' adaptation period. For this purpose we drew up a comparative study and subsequently proposed a solution for the Czech Republic – our solution was based on the professional background of the GA ČR project 15-12956S *What is the purpose of context: Objective determinants of novice teachers' socialisation* with doc. Mgr. Světlana Hanušová, Ph.D. as its principal investigator:

Janík, T., Wildová, R., Uličná, K., Minaříková, E., Janík, M., Jašková, J., & Šimůnková, B. (2017). Adaptační období pro začínající učitele: zahraniční přístupy a návrhy řešení [Induction period for novice teachers: International experiences and implementation suggestions]. *Pedagogika*, 67(1), 4–26.

Our further efforts between the years 2015–2016 – this time under the responsibility of the Accreditation Commission working groups for education, psychology and sports studies, and for subject didactics – aimed at the development and updating of the *Framework concept of primary- and secondary-school teacher education*. This concept was later accepted as teacher education standard after several rounds of debates with the representatives of the MEYS of the Czech Republic on the one hand and the representatives of faculties of education on another.

Stuchlíková, I., & Janík, T. (2017). Rámcová koncepce přípravy učitelů základních a středních škol aneb o hledání a nacházení konsensu mezi aktéry [Framework concept of primary- and secondary-school teacher education: On seeking and finding consensus amongst actors]. *Pedagogická orientace*, 27(1), 242–265.

Conclusion: On attempts to apply research findings to educational policy

Our first encounters with educational policy at national level date back to the year 2009 when the Institute for Research in School Education of PdF MU was assigned with the all-over research into the curricular reform implementation at grammar schools. The research findings together with the recommendations resulting therefrom were presented in the following paper:

Janík, T., Knecht, P., Najvar, P., Pířová, M., & Slavík, J. (2011). Kurikulární reforma na gymnáziích: výzkumná zjiřtění a doporučení [Curricular reform at grammar schools: Research findings and recommendations]. *Pedagogická orientace*, 21(4), 375–415.

It is gratifying that they received rather broad publicity amongst educational practitioners, amongst the MEYS representatives, and in the organisations directed by MEYS. The recommendation resonating relatively most amongst practising professionals in particular was the one suggesting that the curricular reform ought to be developed into a programme supporting productive culture of teaching and learning at school – see the following paper on that topic:

Janík, T. (2013). Od reformy kurikula k produktivní kultuře vyučování a učení [From curricular reform towards productive culture of teaching and learning]. *Pedagogická orientace*, 23(5), 634–663.

Cooperation with organisations directed by MEYS and later with MEYS itself directly in various advisory and expert roles followed (I have been a member of the Minister’s Advisory Board since 2015). An area for cooperation is currently opening up regarding the development of educational policy strategy extending beyond the year 2020. The analyses of the developments in that area to date⁶ indicate that it is the *governance* approach that needs to be adopted for further defining of Czech educational system orientation rather than the simplifying concept of *top-down* management when it comes to the implementation of educational reforms.

Regarding the issue of teaching profession and teacher training, my expertise has grown hand in hand with the cooperation with the Accreditation Commission working groups. As a result, the teacher education standard was prepared in the form of the *Framework concept of primary- and secondary-school teacher education* accepted first by the Accreditation Commission in 2015 and subsequently by the Ministry of Education, Youth and Sports (2016). In relation to that, we have also participated in the development of the professional standard and career progression system for teachers, with specific focus on a conceptualisation of adaptation period for novice teachers. We have compiled a review of international approaches to the support of novice teachers which served as a basis for our proposal for a solution for the Czech Republic.

One of the issues I have paid extensive attention to is the unsolved challenge of further direction of the curricular reform in regional schools. Cooperation on the *revisions* of curricula is currently unfolding at national level. It aims to re-examine the way the goals are set and subject-matter defined in the Czech educational system. I consider this issue relevant and challenging enough to be determined as the subject of our research in the upcoming future.

⁶ Cf. Janík, T. (2016). Škola v pohybu aneb k problému výjezdu a rozjezdu z kruhového objezdu [School in motion: On the problem of exiting a roundabout]. In M. Strouhal & S. Štech, et al., *Vzdělání a dnešek. Pedagogické, filosofické, historické a sociální souvislosti* (pp. 164–179). Praha: Karolinum.