

How to Motivate Law Enforcement Students & How their Individual Flow State Is Reflected in ESP Classes?

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In 2021, the Department of Foreign Languages for Specific Purposes (hereinafter: Language Department) was awarded the 1st place for the prize of “Innovative Department” initiated by the Creative Learning Programme, and the Vice Rector. One of the innovative features of the Language Department highlights that ICT-supported seminars are highly motivating for students.⁴ The objective is to propose what elements are indispensable to make the students’ individual flow experience visible in higher education, and thus, to implement the flow-based pedagogical model in education.⁵ Students are expected to be able to constantly be attentive, independent and creative.⁶ Our research confirms that students enjoy the digital environment because they are challenged to think, problem-solve, and collaborate, thereby they improve their competences and creativity.⁷ In order to enhance the students’ individual flow state and knowledge, a pilot research was carried out to measure the application of Augmented Reality⁸ and the HY-DE model.⁹ The research was conducted in the framework of English for law enforcement in the academic year of 2021/2022. At the end of the test seminars, a Flow State Questionnaire was filled in by the students and their vocabulary knowledge was measured with a self-made test. It is assumed that the use of digital technology in the classroom has a positive effect on the development of the students’ motivation and language skills. According to the initial results, there is a significant difference between the students’ individual flow state in the study and the control group. It means that students in the study groups, where the teaching material was transferred by the use of ICT tools, perceived learning as an experience and a challenge.

Keywords: English for law enforcement, Flow, creativity, Augmented Reality, HY-DE model

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⁴ Ürmösné, Simon, Gabriella, Barnucz, Nóra and Kudar, Mariann, ‘Út az Innovatív Tanszék első helyezett díja felé’. *Belügyi Szemle* 70, no 10 (2022a), 2113–2133.

⁵ Dominek, Dalma, Lilla, ‘On a Flow-based pedagogical model The emergence of experience and creativity in education’. *Eruditio-Educatio* 17, no 3 (2022a), 72–82.

⁶ Dominek, Dalma, Lilla, ‘A FLOW mint a pozitív pszichológia jelenléte az oktatásban’. *Eruditio – Educatio* 16, no 4 (2021b), 72–82.; Dominek, Dalma, Lilla, *Élményalapú környezeti nevelés a természettudományi múzeumokban. Belvedere Meridionale*, Szegedi Egyetemi Kiadó, 2021a.

⁷ Dunleavy, Matt and Dede, Chris. ‘Augmented Reality Teaching and Learning’. in *Handbook of Research on Educational Communications and Technology*, ed. by J. Michael Spector, M. David Merrill, Jan Elen and M. J. Bishop, Springer, 2014, 735–745. Barnucz, Nóra, ‘Digitális pedagógia alkalmazásának lehetőségei a rendészeti szaknyelvi órán’. *Magyar Rendészet* 22, no 2 (2022), 183–196.

⁸ Czékmán, Balázs, ‘Mobiltechnológia a tanórán: oktatási tartalmak, oktatást segítő digitális megoldások’. in *Mobil-Világ-Iskola: Válogatott tanulmányok az I. Mobil eszközök az oktatásban konferenciáról*, ed. by Péter Fehér and Dóra Orsolya Aknai, Debreceni Egyetemi Kiadó, 2017.

⁹ Dani, Erzsébet, ‘A kétfázisú HY-DE-modell: A hiper- és mélyfigyelem fázisváltásai a katedrától a hallgatói önfejlesztéséig’. *Informatika a felsőoktatásban konferencia* (2014).

I. Introduction

In 2021, the Language Department became the 1st prize winner of the “Innovative Department” prize. The expectations of the Creative Learning Programme (hereinafter: CLP) was initiated by the Vice Rector of the Ludovika University of Public Service (hereinafter: LUPS) for the nomination of the most innovative department.¹⁰ The expectations were as follows: fostering and attracting talents, conveying knowledge transfer, collaboration with other departments, the promotion of learning, innovation and creativity, inspiration, and future orientation. The content of the call for the competition of the “Innovative Department” (hereinafter: competition or project) covered a wide range of the students’ expectations; from the promotion of individual learning, motivation of students and professors to developing skills as the presence of collaboration and the exploitation of collective knowledge, which were also highlighted in the project, and these elements are also stressed in Szabolcs Mátyás’s works.¹¹ Taking into account the key competences and the concepts of the CLP, openness to innovations, exploitation of internal and external partnerships and networks were also emphasized amongst the expectations we had to meet. The following issues were also enhanced by the committee of the CLP: the measurement of successfulness and the motivation in education; the improvement towards the sub-optimal areas, mutual values, clear objectives, well-structured methods for creativity of the department, best methods, and the implementation of the good practices. In addition, in order to have a chance to be awarded, we had to give a real insight into how the colleagues inspire each other and the students as well, and how they increase the prestige of the department. Furthermore, the competition involved questions related to how the departments represent collective pedagogical values, educational policy and future perspectives. Finally, the applicants had to prove that the colleagues of the departments could make decisions flexibly, learn fast, how the organisational culture promotes new ideas and how they can make the performance of education visible for the whole Faculty and for the students as well. Needless to say, that as teachers we have to face the Generation Y and Z, who want the maximum benefit with the least effort and whose attention is difficult to capture. Therefore, the question is relevant: why do we (the teachers and the tutors) need change? The answer is easy, and it is visible in the pictures as well i.e. how students look like nowadays both in the classroom and in the break:

Picture 1: Students’ behavior in the classroom and during break¹²



¹⁰ Ürmösné, Simon, Gabriella, Barnucz, Nóra and Kudar, Mariann 2022b.

¹¹ Mátyás, Szabolcs, A Kárpát-medence talentumföldrajza. Mátyás Szabolcs és Társa, Debrecen, (2020).; Mátyás Szabolcs, ‘Talentumföldrajzi elemzések a Kárpát-medencében’. *Területi Statisztika* 61, no 4 (2021), 466–502.

¹² Source: URL1 and URL2

Overall, it is indispensable to apply new methodologies to capture the students' attention on both seminars and on lectures as well. It is substantial to apply the opportunities offered by the digital world, for example, learning and teaching e-investigation skills as well.¹³

II. Applied methodologies & building networks

The colleagues of the Language Department use a wide range of ICT platforms to create competitive spirit, and enhance motivation such as Mentimeter, Quizlet, Quizzes, Kahoot, Redmenta, Padlet, Wordwall, BigBlue Button, Moodle, Classroomscreen, Quiz Show, Mindomo (mindmap), Edpuzzle, Word Art and so on.¹⁴ There are three more methods we started to test in the framework of classroom research in order to enhance the students' motivation: (1) the application of Augmented Reality (hereinafter: AR), (2) the HY-DE model, which influences the hyper and deep attention of the students by multitasking effects such as images, sounds, videos, power point presentations and so on. We also apply (3) the method of Mission-Oriented Preparation (hereinafter: MOP method) in strong cooperation with professionals in a situational linguistic environment, devised by Éva Kovács, targeting the students of private security. This innovative teaching method combines methodological and pedagogical approaches and applies a practical way. Its objective and mission are to prepare students to be fit for their future task in the target language.

In order to comply with the above-mentioned criteria devised by the CLP, various events are organised by the Language Department: we have two compulsory workshops annually in order to train the teaching methods. One of them is the *Innovative methods in language education for special purposes*, where new trends in language teaching, ICT platforms and good practices are introduced such as the application of AR in the classroom, new methods in language teaching, gamification or escape room. The other one is the *Law Enforcement Workshop*, where we have opportunities to keep up with the latest information concerning law enforcement topics like cyber criminality, dark web, terrorism, new psychoactive materials, biometrics, organised crime, security technology and so on. We have participated in such workshops, where we were trained in the topics of forensic linguistics, crime scene investigation, terrorism, cyber criminality, new psychoactive materials, and profiling, since we teach English, German and Russian for law enforcement at the Faculty of Law Enforcement (hereinafter: FLE).

We regularly participate in different *projects or competitions* and four of them have already been awarded: the 1st prize was given by the Internal Affairs Scientific Committee in 2020, then we became also the 1st prize winner of the "Innovative Department Prize" in 2021. Next year, the 3rd prize was received from the Disaster Management Scientific Committee, and last but not least, Nóra Barnucz and her research colleagues took part in the Profformance Higher Education Teacher Award Call in 2022, where the 2nd prize was awarded, based on the project work of the AR-supported good practice. Furthermore, other calls for applications such as the European Educational Research Association Award was also won by us. In addition to the projects and competitions, we take part in publication of Q studies and the Hanns Seidel foundation as well. We participate in *conferences* and congresses in the scientific fields of psycholinguistics, languages for special purposes, pedagogy, and private security as presenters, as we take part in

¹³ Nyitrai, Endre: A magyar nemzeti adatvagyon jelentősége a bűnüldöző szervek munkája során. *Információs Társadalom* 2022, no 1 (2022), 67–80.; Nyitrai, Endre, 'A koronavírus elleni küzdelem és a nemzeti adatvagyon újrahasonosítása a rendőrség vonatkozásában' in *A járvány hosszútávú hatása a magyar közigazgatásra*, ed. by Ádám Rixer, Budapest: Károli Gáspár Református Egyetem Állam- és Jogtudományi Kar Lőrincz Lajos Közjogi Kutatóműhely, 2021, 339–345.

¹⁴ Ürmösné, Simon, Gabriella, Borszéki, Judit, Barnucz, Nóra and Uricska, Erna, 'A rendészeti szaknyelv szerepe a felsőoktatásban és az új nyelvi stratégia bevezetése'. *Porta Linguae* 2021, no 1 (2021b), 185–195.

conferences on law enforcement issues as an audience. Regarding the *constant development of training materials*: in the last 4 years, 2 bilingual English and Hungarian dictionaries for law enforcement, border policing, and immigration policing, 2 German and 2 English course books for law enforcement were published by the Language Department. In process, we have a new course book in the field of law enforcement, customs administration, disaster management and private security with glossary as well.

Research activities are constant and they are also carried out by the Language Department in the fields of psycholinguistics,¹⁵ Greek-Hungarian bilinguals,¹⁶ sociolinguistics,¹⁷ law enforcement topics such as special penal institutions,¹⁸ serial killers,¹⁹ law enforcement lexemes, forensic linguistics²⁰ and the effectiveness of the online education at the FLE.²¹ The technical language of customs administration, border policing,²² immigration, disaster management, private security,²³ biometrics,²⁴ psychoactive substances,²⁵ innovative language teaching methods, e-learning,²⁶ the integration of ICT platforms, the MOP,²⁷ the intercultural competence,²⁸ the comparative literature,²⁹ and the Russian literature, are also research topics at the Language Department. As we have observed the expectations of students, the use of language in the period of COVID-19 pandemic³⁰, the effect of online education and the

¹⁵ Ürmösné, Simon, Gabriella, 'Hungarian-Greek communicative strategies in respect of gender', in *Mentális folyamatok a nyelvi feldolgozásban*, ed. by Judit Navracscics and Dániel Szabó, Budapest, Magyarország: Tinta Könyvkiadó, 2012, 280–290.

¹⁶ Ürmösné, Simon, Gabriella, 'A Case Study Based on a Spontaneous Discourse of Greek–Hungarian Bilinguals in Respect of Interjections, Swear Words and Syntactical Mistakes, as Regards Gender'. *Magyar Rendészet* 17, no 4 (2017), 193–210.

¹⁷ Ürmösné, Simon, Gabriella, 'Gender, szubkultúrák és genderpragmatika', in *Transzdiszciplináris üdvözetek: Lengyel Zsolt számára*, ed. by Judit Navracscics, Budapest, Magyarország, Veszprém, Magyarország: Gondolat Kiadó, 2014, 210–218.

¹⁸ Ürmösné, Simon, Gabriella, 'Amazing Penal Institutions and Dwelling Circumstances of Inmates'. *Internal Security* 11, no 2 (2019), 179–190.

¹⁹ Ürmösné, Simon, Gabriella, 'The portrayal and the attributes of serial killers and some of the most notorious ones'. *Internal Security* 12, no 2 (2020), 261–273.

²⁰ Ürmösné, Simon, Gabriella and Nyitrai, Endre, The phenomena of epidemic crime, deepfakes, fake news, and the role of forensic linguistics. *Információs Társadalom* 2021, no 4 (2021a), 86–101.

²¹ Ürmösné, Simon, Gabriella, Barnucz, Nóra and Kudar, Mariann, 'Út az Innovatív Tanszék első helyezett díja felé'. *Belügyi Szemle* 70, no 10 (2022b), 2113–2133.

²² Borszéki, Judit, 'The role of domain experts in the development of the course English for Border and Coast Guards'. *Rendőrségi Tanulmányok* 2021a, no 1–2 (2021), 6–23.

²³ Christján, László and Kovács, Éva, 'Private security and municipal policing in academic education - an international overview'. *Magyar Rendészet* 18, no 4 (2018), 49–60.

²⁴ Kovács, Éva and Kovács, Tibor, 'Identification and Authentication Potentials Based on Limited Biometric Data', in Security-Related Advanced Technologies in *Critical Infrastructure Protection: Theoretical and Practical Approach*, ed. by Anna Tünde Kovács, Zoltán Nyikes and Igor Fürstner, Heidelberg, Németország: Springer Netherlands, 2022, 391–404.

²⁵ Bacsó, Bernadett, 'A kábítószerrel összefüggő bűnözés elleni küzdelem és a főbb térbeli jellemzői a kábítószer-bűnözésnek a német nyelvű országokban'. *Bűnözéstudományi Közlemények* 4, no 3–4 (2023), 9–18.

²⁶ Borszéki, Judit, 'The Development of E-Learning Tools Used for Teaching English for Law Enforcement'. *Internal Security* 13, no 1 (2021b), 181–200.

²⁷ Szabó, Anikó and Kovács, Éva, 'A személy- és vagyonőrök objektumspecifikus fejlesztési terve (IDPS) MOP-kiterjesztéssel'. *Magyar Rendészet* 21, no 3 (2021), 139–154.

²⁸ Nagy, György, 'A rendészeti hallgató gondolkodásmódja és az interkulturális kompetencia fejlesztése'. *Magyar Rendészet* 22, no 4 (2022), 153–169.

²⁹ Nagy, Éva, 'A turgenyevi témák és I. Sz. Turgenyev "alakjának" problémái F. M. Dosztojevskij "Ördögök" című regényében'. in *Műértelmezés – fordításkritika – transzmedialitás*, ed. by Zoltán Dominika, Péter Bali-Farkas and Sarolta Krisztina Tóthpál, Budapest, Magyarország: ELTE Orosz Irodalom és Irodalomkutatás - Összehasonlító Tanulmányok Doktori Program, 2022, 119–131.

³⁰ Uricska, Erna, *COVIDictionary New words and phrases related to the global pandemic*. Budapest: Rejtjel Kiadó, 2021. Uricska, Erna, *COVIDictionary 2.0 New words and phrases related to the global pandemic*. Kecskemét: Smaragd Kiadó, 2023.

usefulness of education maintained by the principle of the Computer-Assisted Language Learning (CALL) and the Mobile Assisted Language Learning (MALL) were also measured at the FLE. In addition to the preparation for the exam of Language for Service (LforS), general intermediate language exam, consultations, competitions, scholarships, the *building of foreign networks* were also highlighted in the project. We *upgrade the students* who do not possess the B2 language exam, and we *mentor them* for the LforS ESP exam. Earlier we had an opportunity to prepare the students for the Chinese scholarship to the Zhongnan University and cyber competition as well.

Due to the international work team within the framework of FRONTEX, we have Italian, German, Romanian and Slovenian connections, and due to the CEPOL training programme, we have Estonian and Cretan collaborations as well. We foster Irish relationship too, regarding the University of Limerick. In the framework of the series of the Summer School of Psycholinguistics, we cherish international connections as well. Regarding our *national memberships* and collaborations, we can mention the Hungarian Association of teachers and researchers of languages for specific purposes, the Hungarian Association of Applied Linguists and Language Teachers, the Summer School of Psycholinguistics, Fédération Internationale des Professeurs de Langues Vivantes and the ICT MasterMinds research teams. We also keep in touch with the experts of the other departments such as the National Tax and Customs Administration, the Border Policing as well, which authorities let us participate in field works, in authentic environment. We also foster relationship with a forensic linguist and a crime scene investigator as well. In the framework of the project, *the international connections via Erasmus+ mobility* and the cooperation with different universities were also highlighted such as the University of Nicosia in Cyprus, the Istanbul Kültür University, the Estonian Academy of Security Sciences in Tallin, the Police Academy in Szczytno, in Zilina, and in Appeldorn. We used to teach in the Academy of Police Force (Bratislava), and in Rothenburg (Hochschule der deutschen Polizei) as well.

III. The Augmented Reality

Augmented Reality is an increasingly widespread technology that allows the computer to generate virtual elements into the physical world such as a 3D model, an animation, or a video.³¹ According to the most widely accepted definition of AR, it combines the real and virtual world interactively, all registered in 3D.³² The augmented system is taken place between the real and virtual world. There are several types of AR: marker less-, location, marker or superimposition-based AR. It can be adaptable for military purposes, entertainment industry, marketing or medical and educational purposes as well, and either a smart phone or a tablet is required for the visual image.³³ First, it provides a motivational basis in the classroom, and supports both project and team work as well. Second, it is useful for a wide range of classroom activities such as cooperative tasks, simulation, discussion, debate, presentation, explanation, and demonstration as well.³⁴ The application of technologies like Artificial Intelligence (AI),

³¹ Matuszka, Tamás, 'Kiterjesztett valóság alkalmazások fejlesztése, elemzése és a fejlesztőeszközök összehasonlítása.' 2012. TDK dolgozat, ELTE IK. <http://people.inf.elte.hu/tomintt/tdk.pdf> [2023.11.07.]

³² Azuma, Ronald, T., 'A Survey of Augmented Reality.' *Presence: Teleoperators and Virtual Environments* 6, no 4 (1997), 355-385.

³³ Aknai, Dóra, Orsolya, Balázs, Czékmán, Péter, Fehér, 'Kiterjesztett valóság (AR) alkalmazások használata és készítése az iskolában' in *Iskola a társadalmi térben és időben VII.*, ed. by Patrícia Maisch, Nikolett Márhoffer, Zsófia Molnár-Kovács, Nikoletta Szekeres, Karolina Szücs-Rusznak, Pécs: PTE BTK "Oktatás és Társadalom" Neveléstudományi Doktori Iskola, 2021, 150-156.; Barnucz, Nóra, 'A kiterjesztett valóság alkalmazása a nyelvoktatásban különös tekintettel a rendészeti szaknyelvre'. *Educatio* 29, no 4 (2020), 644-652.

³⁴ Ibañez, María, Blanca, Uriarte, Aldo, Portillo, Zatarain, Ramón, Cabada and Barrón, María, Lucía, 'Impact of augmented reality technology on academic achievement and motivation of students from public and private

Virtual Reality (VR), Augmented Virtuality (AV) and Augmented Reality (AR) have appeared and expected on the labour market. We highly appreciate the cooperation with the company of the Stiefel Interactive Ltd.³⁵ who developed the eduARdo software in Hungary. On the one hand, the students of the FLE were able to test how to apply it for content consumption and content creation as well, and on the other hand, we could measure the added value of the application of software for the learning and teaching process and for the development of the students' vocabulary knowledge at the LUPS.

IV. Presentation of the research

The research was carried out in the academic year of (2021/2022), which was carried out in the framework of a classroom research where the AR software and the HY-DE model were applied to measure the added value of them to the students' individual flow state during the seminar and the development of their vocabulary acquisition in ESP classes for Law Enforcement.³⁶ The classroom research was conducted with the involvement of study and control groups (n=35). In the control group, the teaching material was supported by the use of traditional methods and without technical devices (n=12); in the study group 1, the AR software was applied (n=11), and in the study group 2, besides the AR software, we applied the HY-DE model as a methodology to improve the students' vocabulary knowledge and maintain their individual flow state on the seminar (n=12). The question may arise whether traditional or Internet-based solutions/tools provided higher individual flow state for them and could help them learn more professional language terms in the context of ESP classes. It is assumed that the use of digital devices provides more contribution; the students acquire new vocabulary and they have a positive effect on their involvement (their individual flow state) into the process of teaching and learning. The measurement tools were as follows: pre and post tests for the measurement of the development of their vocabulary knowledge and the Flow State Questionnaire (hereinafter: FSQ) -validated by Magyaródi and her colleagues³⁷ but adapted by Dalma Lilla Dominek at the LUPS³⁸ - to measure the involvement (immersion) of the students for the effect of the application of the ICT tools. In this study, we present the results of the students' individual flow state.³⁹

V. Results

According to the results, there is no difference in the students' individual flow state of the study groups: the students were in a deep, *over 80 percent flow state* due to the application of digital technology, while among the students of the control group (teaching without the application of the AR and HY-DE model) there was no involvement during the transmission of the course material (values below 80 percent). According to our assumptions, ICT-based teaching material

Mexican schools. A case study in a middle-school geometry course'. *Computers & Education* 145, (2020), 103734.

³⁵ The collaboration among the company and the researchers of the project was realized with the help of Balázs Czékmán, a researcher.

³⁶ Barnucz, Nóra and Uricska, Erna, 'Kiterjesztett valóság és közösségi oldalak alkalmazása a nyelvtanításban különös tekintettel a rendészeti szaknyelvre'. *Rendvédelem* 10, no 2 (2021), 4–48.

³⁷ Magyaródi, Tímea, Nagy, Henriett, Soltész, Péter, Mózes, Tamás and Oláh, Attila, 'Egy újonnan kidagozott flow állapot kérdőív kimunkálása és pszichometriai jellemzőinek bemutatása'. *Pszichológia* 33, no 1 (2013), 15–36.

³⁸ Dominek, Dalma, Lilla, 'Creativity in higher education through the flow channel'. *Belvedere Meridionale* 33, no 4 (2021c), 5-12.

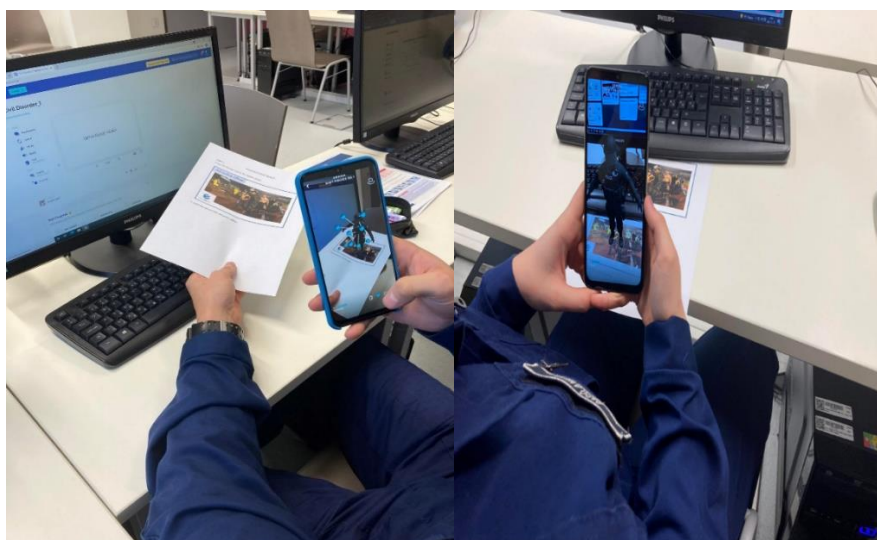
³⁹ Dominek, Dalma, Lilla, Czékmán, Balázs, Bujdosóné, Dani, Erzsébet, Uricska, Erna and Barnucz, Nóra, 'A digitális flow világa. Egy kísérlet első eredményei'. *Tudásmenedzsment* (2024). (forthcoming publication)

has a positive effect on the development of the students' individual flow state, which was proven by the initial results of the research, so it can be concluded that the students experienced the application of the tools/methods in the classroom as a challenge and an experience. In the near future, descriptive statistics, correlation studies and difference analyses will be performed related to the students' vocabulary knowledge and their learning style.

VI. Summary

The classroom research fits perfectly in the Institutional Development Plan of the LUPS (2020-2025), because the goal of experiential pedagogy and the modernization of higher education are both maintained by the research, which can be realized in professional language classes, on the one hand, by student-centred education, and on the other hand, by the development of digital knowledge as well. In addition, the application of the ICT tools in education provides a challenge for the students,⁴⁰ and due to the impact on them, a constructivist-learning environment can be created,⁴¹ where they can merge into the flow experience.⁴² The experimental tools can be used extremely well so that students can monitor the solutions of their completed task and try to identify their difficulties in retrospect – as this allows the instructor to develop problem-solving strategies and critical thinking as well (Metacognitive model).⁴³

Picture 2: Using ICT tools in education ⁴⁴



⁴⁰ Ürmösné Simon Gabriella, Borszéki Judit, Barnucz Nóra and Uricska Erna, 2021b.

⁴¹ Nahalka, István, *Hogyan alakul ki a tudás a gyermekben? Konstruktivizmus és pedagógia*. Nemzeti Tankönyvkiadó, 2002. Dominek, Dalma Lilla and Ceglédi, Szabolcs, 'Alkoss – A találmányosság pszichológiája! Kreativitás mint képességvizsgálat a Tóth-féle kreativitás becslő skála segítségével a Nemzeti Közszerződési Egyetem hallgatóinak körében'. *Magyar Pedagógia* 121, no 4 (2021d), 395–407.

⁴² Csíkszentmihályi, Mihály, *Kreativitás. A flow és a felfedezés, avagy a találmányosság pszichológiája*. Akadémiai Kiadó, 2008.; Dominek, Dalma Lilla, *Flow, avagy játékos kommunikáció a múzeumokban*. Belvedere Meridionale, Szegedi Egyetemi Kiadó, 2020.; Dominek, Dalma Lilla, 2021c.

⁴³ Barnucz, Nóra and Uricska, Erna, 'Innovatív nyelvtanulási módszerek és módszertan a rendészeti szaknyelvi képzés vizsgálatában. Előtanulmány egy vizsgálathoz'. *Új Pedagógiai Szemle* 70, no 9-10 (2020), 53–63.

⁴⁴ Source: Barnucz et. al. (2022): The content was presented on the Spotlight on Higher Education Teaching Performance – Proformance Final Conference, 16 06 2022 Budapest; the visuals were taken in an ESP class as a part of a classroom research of the application of AR.

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