DIGICRIMJUS and CLaER:
Effective methods of teaching criminal law digitally during the pandemic

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Abstract

In this paper we introduce DIGICRIMJUS, an EU supported higher education strategic partnership on Digitalisation and Criminal Law formed by three renowned European universities (University of Szeged - Hungary University of Konstanz – Germany, University of Istanbul – Turkey) focusing on the *New challenges for teaching, researching and practicing criminal law in the digital age*. Digicrimjus is designed around four cornerstones: digitalization - criminal law & justice - legal comparison – teaching & learning. In this framework members of the cohort are not only focusing on traditional questions of criminal law (e.g., criminal responsibility in cases where AI has been applied), but also on other issues in the criminal justice system (such as investigating cybercrime or online visiting hours in prisons). The results of the three years research project (2020/21-2023/24) will be made widely available in the form of comprehensive study and training materials designed for future lawyers and experienced professionals. Furthermore, as a good practice example closely linked to Digicrimjus and teaching criminal law remotely and digitally during the current pandemic situation, CLaER, an online „Criminal Law Escape Room" is also introduced. It was recently developed at the University of Szeged specifically for advanced law students majoring in criminal law and future legal professionals in the field of criminal justice. This digital learning material is designed to mimic in-person simulations and moots in the digital space using gamification methods. Apart from the teachers' perspective, we also reflect on the students' experiences based on their feedback and share some of our future project plans.

Keywords: comparative criminal law, digitalisation, online education, gamification

Introducing DIGICRIMJUS[1]

The University of Szeged[2], the University of Konstanz[3] and the University of Istanbul[4] have formed a higher education partnership focusing on the new challenges of criminal law in the digital age. The three partner's application ranked first among all Hungarian initiatives and has been supported by the European Union's Erasmus+ programme of EUR 150 000. DIGICRIMJUS (*New challenges for teaching, researching and practising criminal law in the digital age*) is designed around the following four cornerstones: digitalization - criminal law & justice – legal comparison – teaching & learning. Its main topic is the applicability of criminal law in today's information society. In this framework, members of the consortium will focus on traditional questions of criminal law (such as criminal responsibility in cases where artificial intelligence has been applied) and other issues in the criminal justice system (such as investigating cybercrime or online visiting hours in prisons).

The idea and planning for this program had been developed through strong cooperation between the leading partners since 2014. Direct communication between the partners is usually seen as a key to developing and to carrying out joint research. Partner work always includes at least to some extent additional working days just for partners to discuss and to develop future activities. Already during the actual application process, these methods of communication were adapted and adjusted to the needs of application and future planning. Hereto, strong cooperation amongst the partners was necessary for brainstorming and completing the application form and for developing concrete impacts of the program for the next years. During the preparations – and because of the COVID-19 pandemic, ever since - the preferred way of communication amongst the partners was e-mail as well as conducting zoom-meetings, cloud-based documents, and a specifically allocated project management interface (adminproject.eu) administered by the

Hungarian partners. Although it all proved to be very effective and successful, all partners agree that it is important to discuss and contact each other in person to find proper solutions, whenever possible as seminars in person cannot entirely be replaced with online and web discussions.

The unique chance of DIGICRIMJUS is to conduct very important interexchange between the best young law students, from undergraduate to doctoral, coming from three very different criminal legal systems: the Hungarian criminal law with a socialistic history, the Turkish criminal law with an Ottoman tradition and many influences from Italian, French, Swiss, German, and even other influences within the past century, and the very traditional German criminal law with a tradition in philosophical and dogmatical development. While the three different legal systems also share some similarities through their past, differences, especially within the culturally dependent criminal law, prevail. However, they all are challenged by digitalization in similar ways. Artificial intelligence is used anywhere to apply autonomic systems. Likewise, people are using different online systems and applications within the clear, the deep, and as well within its darknet. Some of the users are using the internet to their advantage in illegal ways. Nevertheless, criminal laws are not prepared for digital fraud, theft trespassing, and different kinds of digitally trafficking with illegal goods, be it drugs, guns, or child pornography. Furthermore, investigators need to investigate within the internet as well as using digital means. Hereto we need to develop new rules of evidence taking and presenting in court. We are developing the methods of comparative work and research when challenged by digitalization for future law professionals. By comparing the different legal systems, we will look out for best practices and the need for change.

Our main goals include the following: conducting transnational comparative research with the specific focus on challenges caused by digitalization; providing new answers to the methodology of comparative research in criminal law as such; enhancing to understand challenges of digitalization as such within the different states; establishing a new form of teaching and learning in a multilingual, international and professionally high-quality environment; and raising digital awareness of law students, legal professionals and of the broader public. We aim to reach these objectives by preparing and developing intellectual outputs,

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1   DIGICRIMJUS: *New challenges for teaching, researching and practicing criminal law in the digital age.* Erasmus+ Strategic Partnership for higher education, 2020-1-HU01-KA203-078670. Co-funded by the Erasmus+ Programme of the European Union. www.digicrimjus.com

2   Institute of Criminal Law and Criminal Justice led by Prof. Dr. Krisztina Karsai. See (Karsai, 2020)

3   Chair of Criminal Law, Criminal Procedural Law and Comparative Criminal Law led by Prof. Dr. Liane Wörner. See Wörner, 2019; Wörner & Preetz, 2020)

4   Institute Of Criminal Law and Criminology led by Prof. Dr. Adem Sözüer

such as methodological guidelines and a studybook on digital criminal law, as well as an online knowledge hub supported by podcasts, videolectures and online self-assessment quizzes. As for the research methodology, the general rules and methods of academia and legal science apply at the authors' discretion, with the additional specifics of joint research and co-authored papers including first peer-review and internal workshops for discussing project outcomes.

The research results will be transformed into learning units and components, and it is crucial that especially in this field, future law professionals are prepared for the challenges of the digital environment. We plan to carry out unique, entirely new teaching and learning forms in a multilingual, international, and professionally high-quality environment. By including the law enforcement authorities within our states in the program, we will also reach out to different stakeholders, amongst those the international Police Agency INTERPOL.

The development learning materials (intellectual outputs) address students of law, computational science, other subjects, and the future generation and the interested public. The project will develop skills protecting from crimes like digital theft, computer fraud, or being involved in illegally trafficking goods in clear-, deep-, or darknets. In the very long run, this will strengthen (individual) digital human rights in the states, the European Union, and beyond.

Our research addresses the following main questions categorized by the legal disciplinary fields:

a) conflicts of jurisdiction when crimes go digital, criminal responsibility for applying artificial intelligence tools, criminal responsibility of intelligent agents, due care and culpable negligence when using autonomous cars; DIN standards, state and Non-State provisions allowing autonomous driving, the risk-bearing community as a solution in dilemma situations applying autonomous systems, criminal responsibility of cloud operators in cases of attacks on data or data-misuse, criminal responsibility of darknet platform operators and providers (substantive criminal law, general part)

b) criminal liability using products from 3D printings, serious threats of hate and violence online – nationally and transnationally needs for incrimination; criminal responsibility when using drones; the spread of „fake news" as a crime, digital trespassing, money laundering online; digital theft of bitcoin – a question of computer fraud; phishing, doxxing and similar actions – a call for new crimes (substantive criminal law, special part)

c) digital preventive police work by using body cams predictive policing; the admissibility of digital investigations prosecuting internet criminality; criminal investigation undercover – the undercover agent goes digital; admissibility of criminal investigations within the darknet; substantive criminal law for lack of evidence? – A critical analysis of creating criminal law to allow the taking of evidence; the obligation to provide information against internet service provider, the E-Evidence-Regulation of the EU and how it shapes the criminal procedure (procedural criminal law)

The results of the three year's research project (2020/21-2023/24) will be made widely available in comprehensive study materials designed for the new generation of law students and future lawyers. Apart from this, raising social awareness on digitalization and criminal law is a further important project objective. The strategic partnership also aims to design a future joint LL.M. programme offered by the three renowned universities on digitalizing criminal law and comparative criminal law.

An example of innovative learning tools within the framework of DIGICRIMJUS was originally planned as *"Quizzes on comparable cases from criminal justice globally"* already at the beginning of 2020. The starting point for this was, that some form of questioning has always been inseparable from any kind of education. In recent decades quizzes have been a common way of examination. We were also bearing in mind, that apart from educational use, a lot of people, mainly among the younger generation like to take quizzes in their spare time as well. From the combination of the two abovementioned areas of quizzes, the use of game elements in a non-game context, thus the concept of gamification was born. Not only does it encourage the participation of students in classroom activities, but it also contributes to the improvement of the general learning experience. It has been proven that implementing gamification into education increases students' engagement and motivation and has a generally positive outcome on achievement. (Wiggins, 2016) For these reasons, we thought, that a project about digitalization – such as DIGICRIMJUS, shall itself make use of digital instruments. Therefore, we decided to develop digital quizzes, which include a simple case description, whereby players are asked to guess the applicable criminal law sanction for a certain offence in the respective countries. In this context, a great emphasis is laid on stressing the abovementioned differences among the three countries' criminal law

approaches. This concept was designed to provide an easy to receive way to introduce comparative criminal law to a non-legally qualified audience.

Introducing CLaER[5] as a good example

After the outbreak of the COVID-19 pandemic and the subsequent shutdown of universities, we, just like all of our colleagues in academia have experienced significant challenges concerning our primary teaching activities, even outside the framework of DIGICRIMJUS. On 11th March 2020, the Hungarian Government declared a state of danger [Gov. Decree 40/2020. (III.11.)] and prohibited students from entering higher education institutions. [Gov. Decree 41/2020. (III. 11.)] In response to the situation, forms of digital teaching had to be implemented. One particular concern was our Criminal Justice Specialization Module offered for advanced law students and the course *"Drafting legal documents in criminal law cases and criminal law MOOT"*. This course revolves specifically around the solving and adjudication of a pre-selected real-life attempted murder case[6] and heavily relies on interpersonal exchange, which at the time seemed extremely difficult to implement in an online environment.

Partly relying on our plans in DIGICRIMJUS and also as a result of the organic and ad-hoc development of an other pre-existing original idea, the solution to the problem came in the form of an online Criminal Law Escape Room – CLaER. The aim of CLaER was to prompt the students to familiarize themselves with the facts of the fairly complex case used as the basis of the legal documents to be drafted in the course of the semester with the method of gamification. In accordance, we defined the learning outcome as better understanding of the factual elements of the case while recalling their previous knowledge in criminal procedure law.

For the platform, we decided to use genially,[7] because it offered an easy to use, free and open access environment for interactive teaching content development. Using this tool, it took approximately 50 working hours over 3 weeks by 4 university lecturers (all legal educators, no IT or graphics experts) for the first version of CLaER ready to be tested and become operational in Hungarian.

In class, students are instructed to go to genial.ly, solve the escape room, and based on the acquired ("investigated") information, put the facts of the case together in form of a charging proposal. Finally, they are required to turn it in via the University of Szeged's online educational ecosystem Coospace. This case is then the basis for all legal documents (indictment, motions, court orders, sentences, etc.) to be drafted over the semester.

When first opening CLaER, they are presented a police report in the form of a subjective first account from the victim's perspective: *"Someone tried to kill me at work by setting me on fire. I didn't recognize them."* Then, they find multiple persons of interest to be interrogated as witnesses at this stage. Each of these provides fictional subjective statements from their perspective of the events containing crucial information relevant to the facts of the case. To receive pieces of information (witness statements, crime scene analysis results, etc.) the student players (acting as "investigating officers") first need to successfully answer a question regarding relevant sections of the Hungarian Criminal Procedure Act. They always get immediate feedback on their answer: if it is correct, they access the information needed to solve the case. Recognizing the challenges faced by students in online education and their increased need for motivation, we designed the tasks as an open book exercise and in case of wrong answer, we embedded an encouragement to further practice and repetition by always giving them the possibility to retry.

Besides the witness interviews, the players also have to visit various scenes relevant to the crime by clicking on them, where the same method applies. Upon completing almost all tasks (characterized as investigative measures), they return to the police station to reconstruct the acts of the perpetrator, construct a timeline of the facts of the case and solve it. Finally, they have to identify the suspect in a police lineup. Upon successful identification, they are given final praise for the achievement and an external link to the Coospace interface for turning in the charging proposal they drafted following the competition of CLaER. This is a formal written assignment, which is evaluated by the lecturers and the result counts towards the final marks.

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5   CLaER was originally first developed in Hungarian under the title „A tüzéptele₁ titka" (The Secret of The Construction Site) in 2021 by Krisztina Karsai, Zsanett Fantoly, Zoltán Ragány, András Lichtenstein at the University of Szeged, Institute of Criminal Law and Criminal Science. https://view.geniai.ly/60₀7a₁88db₀b-cf0d₀abc7₀25/game-breakout-a-tuze₂ptele₁-titka

6   Based on the following court decisions: Szolnoki Törvényszék B.557/2014/32.; Szegedi Ítélőtábla Bf.610/2015/14.

7   https://www.genial.ly/

As for the students' feedback, CLaER received generally positive reviews from members of the target group. In an immediate anonymous survey conducted in online class, 95 % found CLaER helpful for better understanding of the case and also more exciting in comparison to only reading the case file. This was also clearly noticeable from the teacher's perspective. This year's students, assigned to solve CLaER generally were more familiar with the case in class even concerning minor details of information, than previous students attending in-person classes pre-CLaER. At the end of semester Student's Feedback on Teacher's Work, opinions were also favourable concerning the course *"Drafting legal documents in criminal law cases and criminal law MOOT"*.[8] For the contribution of the tasks solved during the semester for better understanding of the material and passing the course scored 4,63 on a scale of 1-5, where 5 being the best. The same score, 4,63 was reached for interactivity of the course and detailed evaluation of the assignments. In the comments, one individual praised the teachers' work for developing CLaER and highlighted its contribution to their success in completing the course. However, the same person also noted that a class was cancelled for development reasons and was later not substituted.

Closing remarks and future prospects

We are convinced about the importance of our DIGICRIMJUS project not only in including the chances for stronger communication between us, as partners of higher education, but also our students on the challenges of digitalization within the different legal systems. Our goal is to develop study plans together each year of the project's cycle, critically discuss, and create new methods of comparative research, and also extend our knowledge and teaching model on digital criminal law and digital criminal procedure.

Although we originally expected the possibility of joint seminars from the very beginning, due to the COVID-19 outbreak and the unforeseeable consequences thereof, we needed to adapt and respond to the new circumstances quickly. Such an example – apart from online meetings and seminars -, was the inclusion of CLaER like gamification methods into the main project's framework. Based on the experiences gained and feedback given, our future plan is to keep on relying on CLaER even when returning to in-person teaching or blended learning after the pandemic, while extending the use of it to other courses as well. Apart from that, we will keep working on implementing the methods of CLaER to DIGICRIMJUS as an interactive learning tool by developing case scenarios and questions specific to the challenges of digitalization and criminal law.

We take great pride in the fact that our project was ranked first among all Hungarian applications and also that approaching the first evaluation cycle our work seems to be proven successful even in the midst of a pandemic. This first year showed us that we are able to adapt well to cyberspace, as well expected from a digitalization centered project. Although we can and well keep up the online presence, we also look forward to seeing our partners, colleagues and students in person, remaining open to form new partnerships, and encouraging others to take part in our project or form similar training cooperations.

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8 https://oktweb.neptun.u-szeged.hu/OMHV/AJTK/OMHV_AJTK_20212.aspx (restricted access for University of Szeged Teaching Staff)

References:

- Karsai, K. (2020) Algorithmic Decision Making and Issues of Criminal Justice - A General Approach. In: Miheş, C.D. (ed.) In honorem Valentin Mirişan Gânduri, Studii şi nstituţii. Bucureşti, Romania, Universul Juridic, pp. 146-151. Available from: https://ssrn.com/abstract=361ء106 [Accessed 12 June 2021]

- Wiggins, B. (2016) An Overview and Study on the Use of games, Simulations, and Gamification in Higher Education. *International Journal Of Game-Based Learning*. 6(1), 18-29.

- Worner, L. (2019) Der Weichensteller 4.   - Zur strafrechtlichen Verantwortlichkeit des Programmierers im ' !otstand für 'Vorgaben an autonome Fahrzeuge. *Zeitsch ift für interna ionale St afrechtsdogmatik* 1/2019, 41-43.

- Wörner, L. & Preetz, N. (2020) The New German Darknet-Criminal Law-Draft – Darkening by Restricting Individual Rights. *Journal of Penal Law & Criminology*. 8(1), 33-58.

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