Reflect Lab

Supporting Lecturers in Applying Inquiry-Based Learning

Intellectual Output 6: Easy-to-implement-Kit

Leading Partner P1: Leibniz University Hanover

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Dear Reflect Lab Participant, Dear Lecturer!

This manual will support you to familiarise yourself with the ReflectLab methodology and guide your students through the experience of inquiry-based learning.

The Reflect Lab method aims at supporting your students to develop the skills to investigate topics that are discussed in a confrontational way. This manual will help you to create a learning environment that empowers your students to undertake this journey, which will broaden their investigative and analytical skills. An inquiry-based learning approach will always allow new questions to arise, and as such, this manual cannot be a complete guide or answer all your questions. It will, however, give you advice on how to proceed and where to turn when you have questions about your next steps – or alternatively, where you should begin.

On the subsequent pages you will find information on the Reflect Lab method and its specific demands on teachers. Please be aware that this short manual can only give you an introduction into the approach, and for further information, please consult our website at https://www.reflect-lab.eu/

We wish you and your students many interesting and engaging ResearchLabs and we would be interested to hear or read about your experience! We wish you all the best with this teaching method and hope that this manual will be of use to you.

The Reflect Lab team

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Content

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1. Introduction to ReflectLab

University teaching should increase students' capacities to contribute actively and positively to their societies. This includes support to raise their capacity to think critically, to work independently on their own and in teams, and to take over responsibility in the democratic development of their societies. The curricula of social sciences and teacher education should especially provide such skills. Given the current political discourses about and against refugees, migrants, gender equality and sexual diversity, as well as societies' shifts towards right-wing politicians, such skills gain even more importance. Education should provide knowledge about European citizenship and raise a critical awareness towards current social and political developments.

Universities can play a crucial role in providing these abilities. Furthermore, students (and teachers) often complain about teaching methods, considering them ineffective, and they criticise that studying at universities does not differ significantly from learning at school. Given the tendency of universities to become increasingly school-like, effective ways have to be found to support students to develop critical awareness. Classical teaching methods do not always foster the development of these skills.

Within the scope of the ReflectLab project, we suggest that the method of Inquiry-Based Learning (IBL) can contribute to such a process. This approach invites students to work on a small research project on their own, assisted by their lecturers when necessary. Students are invited to inquire on a specific topic, including the development of a research question, its theoretical framing, the selection of adequate methods, culminating with the empirical study and its evaluation. All these steps are accompanied with student tutors and lectures who support the students. One aspect of Inquiry-Based Learning is Problem-based Learning (PBL). This approach requests students to find solutions to specific problems proposed by their teachers. Students are invited to make use of the infrastructure of the university (libraries, computers, etc.) in order to cope with this task.

ReflectLabs are laboratories for reflection and critical thinking. They constitute a form of facing the problems mentioned at the beginning, which has already been tested. ReflectLabs need to be structured and designed for the specific teaching purposes of a given academic and socio-political context. By using the concept of IBL as a model, ReflectLabs invite students to use the infrastructure of the university similar to scientists. They have to develop their own research topic and question, and while doing their research they can draw on the support of

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professional academics and materials provided by them. Such a method provides students with a supportive environment, which allows them to work on their own but receive support when they need it. As a result, students can be proud of the results they have achieved on their own.

Regular university seminars tend to be teacher centred or structured in such a way that students present, one after the other, lectures on a specific topic. By using a ReflectLab, students do research on a question related to the overall topic of the seminar, so they are provided the opportunity to focus on one question and to in-depth research. Specific supporting materials, methodological guidelines and support by teachers are provided during the seminar.

For this project, the following five universities in five different European countries have co-operated:

Leibniz University of Hanover, Germany

Alexandru Ioan Cuza University of Iași, Romania

Nicolaus Copernicus University of Torun, Poland

Universidad de La Laguna of Teneriffa, Spain

Manchester Metropolitan University, United Kingdom

They have structured their results in six milestones or "intellectual outputs": A State of the Art Inventory Report (IO1), a manual for lectures who wish to implement ReflectLabs (IO2), a manual for students, providing them with necessary information about the method (IO3), a blended learning course for lectures (IO4), a platform providing materials for ReflectLabs (IO5), and this Easy-to-implement Kit (IO6). All the documents are provided on our website: https://www.reflect-lab.eu/ and platform: ReflectLab.uaic.ro (also available at

1.1. Intellectual Output 1: State of the Art - Inventory Report

The aim of the inventory report was to identify the needs for Inquiry-Based Learning (IBL) and Problem-Based Learning (PBL) at universities. What has already been experienced when applying this method, or parts of it? Has the method provided to be useful? What kind of support do lecturers need in order to implement IBL and PBL, i.e., ReflectLabs, for their courses?

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In the participating countries, a total of about one hundred lecturers with teaching experience filled out our questionnaire on IBL and PBL. Ten qualitative interviews were made in order to complement the data provided by the quantitative enquiry. The lecturers come from a variety of backgrounds: in most of the countries, about half of the lecturers providing answers to the questionnaire were female, with a significantly different proportion in the UK (17 women and 3 men). Most lecturers were between 30 and 35 years old and had a teaching experience of five to ten years, corresponding to their age.

The answers to our questions about their experiences with IBL and PBL enabled us to reflect about appropriate approaches which could be used in the different countries in order to support university teachers in their professional development, keeping in mind our aim to support students to develop critical awareness and a sense of European citizenship.

About 40 to 50 percent of the lecturers had some kind of experience with IBL and PBL teaching approaches. They had, however, no coherent knowledge about both concepts. Many of them used the concepts synonymously or were not able to give a precise definition at all. Some definitions were incorrect. This is, in fact, quite a devastating result. However, also lecturers who claimed to have no experience with using these methods did have vague ideas about them. Most lecturers wished to learn more about IBL and PBL, and they also wished support in order to implement them. Lecturers claimed that it was the infrastructure of the university, the teaching system itself and the curriculum which did not allow them to integrate new teaching methods.

All those lecturers who had already made some experience with IBL and / or PBL claimed that these experiences had been very positive and were very keen to continue using them. They claimed that it supported their students to develop critical thinking as well as deeper knowledge on how to work independently. Students remembered the concepts they learned better and were also able to apply them in their research. Lecturers claimed that by applying IBL and PBL methodology, their students developed motivation to inquire independently and considered the learning process more appealing and interesting as compared to traditional classes.

Time restrictions are a major barrier for implementing the IBL and PBL methodology. Many lecturers also indicated that they were not informed about online teaching tools and technical devices used in ReflectLabs. Platforms such as stud.ip or Moodle as well as internal information systems of universities are the most common ones used by lecturers, but only about half of the respondents knew them.

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This project offers an ideal opportunity to bridge the gap between the frequently raised intent to use both IBL and PBL and the lack of knowledge both about the methods. The dissemination of the project materials on the internet, through brochures and leaflets as well as in seminars are therefore promising endeavours in order to spread the concepts of IBL and PBL and provide lecturers with the necessary skills for their implementation. Webinars allow spreading the information across the European Union and beyond.

Among some of our partners, ReflectLabs are an established strategy of teaching. In Hannover, it started with the name "Politik-Labore", i.e. *laboratories* on politics, for pupils of the region. Within this approach, pupils had the opportunity to experience a whole day of work at the university and observe how scientists, and especially social scientists, work. The very positive experienced by this project was then adapted for university students. Based on this experience, the consortium developed several ReflectLabs and improved them during the course of this project. We invite other lectures to adapt them according to their specific needs. The application of ReflectLabs can be useful in spite of restraints due to specific curricula. Our project cannot resolve all problems related to specific curricula and also our partner organisations had to struggle with related challenges, nevertheless we encourage lectures to enquire about ReflectLabs and use the approach for their teaching. The materials we provide in this project intend to support lectures in doing so.

1.2. Intellectual Output 2: Manual for lectures

The manual supports lecturers to familiarise themselves with the ReflectLab methodology and guide their students through the experience of inquiry-based learning.

Different aspects are crucial for implementing ReflectLabs:

- The infrastructure of the university: Lecturers have to make sure to have access to the internet and libraries, as well as enough space and moveable chairs and tables. A projector as well as printers are useful. The learning environment has to be supportive and motivating.
- Know our students: The lecturer has to develop the capacity to create a stimulating learning atmosphere and to balance between guaranteeing the maximum freedom for the students when engaging in their own research, with the necessary (minimal) control of their learning process. In order to achieve this balance, it is important that

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lecturers know their students well. The aims of the class as well as the topic(s), the methodology and questions of ethics in research have to be communicated as clearly as possible. It is helpful for students to understand the context of the course as well as the criteria for their later assessment.

- The role of the lecturer: While lecturers are supposed not to intervene unnecessarily, their role is significant: they have to realise when their intervention is necessary, and how to manage this intervention effectively. This implies that they have to develop their capacity of self-reflection as a prerequisite to fulfilling their role during an IBL or PBL experience. They have to be self-reflective when explaining the structure of their course, its content as well as the application of the ReflectLab strategy. They have to consider whether the course is well enough organised and to plan enough time for supporting students to identify their research questions. They have to create their syllabus and write down the content they wish to transmit as well as the methods they wish to apply. They have to reflect on how they wish to guide their students so that they consider different aspects and perspectives of the topic of the course. They also need to reflect about their capacity to motivate students and to plan a process of evaluation of their own performance. They have to reflect about their role as a lecturer, and they have to realise when they need to intervene in the research process of the students.
- Grading: In order to develop their own projects, students have to feel safe about the criteria of assessment and grading. Lecturers therefore need to make their criteria transparent at the beginning of the course and stick to them. Projects without assessment prove to be successful, so if that option is available, lecturers might wish to opt for it. If grading is obligatory, assessment should focus on the learning process and success rather than the result of the research.

The complete manual can be downloaded from the project's website.

1.3. Intellectual Output 3: Manual for students

This manual will support students in making their portfolio as expected, using the learning method proposed by the Reflect Lab. It contains information about the development of the portfolio as well as the research methods they are likely to employ.

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The ReflectLab strategy aims at supporting students in developing the necessary skills needed when researching topics that are discussed in a confrontational and thought-provoking manner. This manual will help them to develop their own research questions within such topics, chose the appropriate research method to address these questions and present it in the format of a portfolio. Such an inquiry-based learning (IBL) approach recognises that new questions will always arise, and this is why such a manual cannot be a complete guide with regard to the research. It will however give students advice on how to proceed and where to turn when they are uncertain about their next steps – or about how to start.

In the manual, they will find information on the Reflect Lab method, as well as on the process of social science research. However, this short manual can only give an introduction into different research methods that can be of interest for the research project. Students are asked to consult the specialised literature in the library of their university for further and more detailed information.

The stimulus materials students will be exposed to will allow them to develop a variety of different research questions. The main aim of the ReflectLab is to support them to develop their capacity of reflection and inquiry in the circumstance of polarised debates. For this purpose, they need to be able to conduct their own research, and they also need criteria to analyse the research conducted and published by others.

Students will develop portfolios during the ReflectLab. These portfolios, as well as the corresponding reading, analysis and discussions should support them to acquire crucial knowledge about inquiry and the necessary openness and rigorousness to develop a research question and a research plan. They are part of a learning process which helps them to find their own way through social science research, and to finally contribute in a positive manner to the problems discussed in the society today.

The complete manual is available at the project's platform.

1.4. Intellectual Output 4: Training program

During the second year of the ReflectLab Project staff training aiming to acquaint university staff with the ReflectLab strategy had taken place. Over 30 academics from all five-partner universities participated in a five-day training in Hannover, Germany.

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Prior to the training, all participants registered on the ReflectLab IT platform, thanks to it gained access to training materials, and had a chance to virtually meet with the colleagues from the partner universities.

During the first days of the training, all outputs produced by the Project Consortium were presented and discussed. During the following days, all staff actively participated in the development and testing of the ReflectLab strategy, methods and tools. All activities had been really important due to the fact that they allowed the participants to reflect on the ReflectLab strategy and propose adaptations to the process. Training resulted in teachers being able to become facilitators of the teaching and learning laboratories.

After the training, all staff had been responsible for implementation of the ReflectLabs and incorporating ReflectLab strategy, methods and tools in their teaching. In order to be able to engage fully with diverse groups of students the materials created had to be, in some cases, modified, and also new materials had been developed. All tutors were supported by the members of the Project Consortium in the process of preparation and implementation of the ReflectLabs.

1.5. Intellectual Output 5: Learning platform

This IO consists of an IT Platform that can be use by teachers, students and pupils in the process of teaching and learning.

For the ReflectLab Platform a WordPress platform was chosen that is accessible for all interested persons, serves for exchange, information and mutual support. The users of the platform are able to access all the intellectual outputs and learning materials uploaded on the platform, to share good practices, and to communicate among them by using chat and video functions for reciprocal exchange and support. All partners have been involved in the preparation of O5 by offering their contribution in equipping the database with e-tools and training offers from their region and country.

Alexandru Ioan Cuza University of Iasi guides the users in using the IT Platform.

1.6. Intellectual Output 6: Implementing ReflectLabs

The Easy-to-Implement Kit supports lecturers who wish to introduce ReflectLabs as a teaching strategy in their classes. It gives you an overview of the foregoing IOs and the experience of

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implementing ReflectLabs by the project partners in five universities, adapting the model elaborated by the University of Hannover for their specific environments. Project partners used different stimulus materials in accordance with the specific topics of their classes. They also experimented with different forms of implementing the ReflectLab methodologies in their courses. These case studies provide lecturers who wish to implement ReflectLabs with a range of alternative models. A SWOT analysis structures the results of these experiences and summarises aspects lectures might wish to take into consideration.

2. Case studies: Use of ReflectLab in different university training contexts

The following forms of implementation were tested: (i) applying ReflectLab strategy during the whole semester, (o) applying it during blocks, (ii) applying it on one unit, and (iii) rearranging parts of the ReflectLab strategy.

2.1. Implementing the ReflectLab strategy during a whole semester

In two cases, partners opted for organising the whole semester course as a ReflectLab.

Case 1: Universidad de La Laguna of Teneriffa, Spain

The course was imparted in 2018-2019 to approximately 125 students and dealt with the topic of migration.

The ReflectLab strategy was adapted for the course in the context of a module on the "evaluation of institutions and educational organizations" of the third year of a degree in Pedagogy. The students had to reflect on immigration and apply what they learned to the project of the subject, including a dimension of analysis of the centres that collected information on the measures adopted in schools to promote the academic and social integration of immigrant children. At the end of the course, the students delivered an individual portfolio with the activities carried out and a reflection on their learning. The discussion groups consisted of ten students, but the groups for the development of the projects were different and consisted of six students.

The infrastructure of the university was adequate for the attention of the group of students, in spite of being located in a noisy area; this affected the continuity of the class and sometimes

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lowered the attention of the students. The Internet connection was good, and the institution provided a computer, a projector and cable connection. Although the Wi-Fi network worked properly, difficulties arose for the students to connect properly in the most numerous classes, i.e. classes with nearly 100 students. Given the size of the groups it was been difficult to put the methodology into practice, only the group's spokesperson had the opportunity to intervene and discussions were difficult.

The lecturer had to adapt the theme to the content of the subject, i.e. he had to look for materials that specifically addressed the attention of immigrant students in schools, the corresponding legislation, etc. These materials were used together with those initially proposed by the project partners. In general, students had difficulties with reading and following instructions in English, so translations into their native language was necessary for the implementation.

For making best use of the ReflectLab strategy, it is better to work with smaller groups of students and to have classes oriented towards practice. The size of the groups and classes at the university make it difficult to develop classes that use the ReflectLab methodology. However, the students adapted very well to the working dynamics, and in spite of their quantity they were motivated to participate in the debates. It would also have been necessary to have more time available.

Case 2: Universidad de La Laguna of Teneriffa, Spain

The ReflectLab methodology was applied in a course of approx. 20 students studying the 4th year of social & cultural anthropology. The class was divided into groups, and every group looked for an African or Latin-American association and worked with them (doing observation, interviews, etc.). The experience proved very rich for the students and the associations, the main complaint was the lack of time. The motivation of the students was very high. However, the students' prejudice were obstacles for the ethnographic studies. While reflection was an important aspect during the research process, there was not enough time for it. Reflexivity is a crucial element when applying experimental approaches and doing social research.

The ReflectLab approach as applied in the class proofed to be fascinating but also incomplete. After the research, analytical reflection requires more time, and methods going beyond collaborative ethnographic research need to be developed.

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2.2. Applying ReflectLab during certain blocks of the class

Case 3: Manchester Metropolitan University, United Kingdom

The approach was testes in two different settings: i) Ten students, 3rd year undergraduates from the Abuse & Safeguarding Programme, Contemporary Issues in Abuse Unit, on the topic of Abuse of displaced people, Modern Day Slavery and Domestic Violence; and ii) 25 students, 3rd year undergraduates from the Childhood & Families Programme, Transforming Childhood Unit, on the topic of Global Child, Gender & Sexuality. In both cases, groups consisted of four to five students. There were no problems regarding infrastructure. All rooms made it possible to work in groups (move the table and chairs) and all rooms had Wi-Fi and projector so students were able to access videos (used as stimuli materials).

The stimuli materials created by the RL Team could not be used because they were not relevant to the subjects. Therefore, stimuli material packs were created in order to run the ReflectLab classes. The preparation and search for the stimuli materials can be time consuming (i.e., to ensure that the materials are relevant and diverse). The stimuli materials proved to be very useful in addressing various academic topics; they can be a fantastic starting point to independent research of a student.

Mind mapping was a useful way of helping students to generate ideas and make connections in learning.

However, students did not find it particularly easy to generate their own questions. This required more specific guidance and modelling of what is understood as a critical question.

In the first session, too many materials were provided for the students. Students were given access to the materials before the session, and they were asked to familiarise themselves with the written texts in particular. However, the majority of students had not done this. It was therefore necessary for the students to be given considerable time during the session for reading the documents that we provided. Some students found it difficult to sustain concentration and became quite easily distracted during the reading and research part of the activity. They also reported that there was too much information for them to read in the session. In the following sessions, expectations were amended and the students were provided shorter and fewer texts.

Group dynamics and relationships are important. It should not be taken for granted that students are confident to work as a team – students reported that they preferred working in

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groups where they had established relationships as this helped them to designate different roles according the skills and interests.

Students commented very positively on the opportunity to work in groups and they found it very helpful to be able to discuss various ideas with their peers. Group work in the academic environment (which often promotes individual successes and competition between colleagues in regard to academic achievements) encourages cooperation, communication, exchange of knowledge, teamwork, and teaches students how to debate and discourse controversial and sensitive topics in a diplomatic, rational manner.

Case 4: Nicolaus Copernicus University of Torun, Poland

The ReflectLab strategy was tested with the topic "rise of nationalism", with 27 students of year 3, BA, studying Journalism and Social Communication. Groups of five students were formed. The lecturer drew upon the ReflectLab guideline and the Intellectual Outputs. The classroom was fully equipped with a computer, a projector, internet and a sound system. The course consisted of 30h teaching course, two hours per week in winter semester 2018/2019. The ReflectLab was implemented in 15h of this course, however, the main idea of the project was visible in most of the sessions. During the first classes of this course, the lecturer introduced tests of knowledge and competences. Only those students who had the best grades were invited to join the ReflectLab testing module. The ReflectLab idea proved soon to be useful: the moment the implementation of RL began, even when the course moves forward to another module, the students in the group still use the innovative ReflectLab way of thinking.

Case 5: Alexandru Ioan Cuza University of Iași, Romania

The Romanian team involved five teachers into the implementation of the project, one working with Future Primary School Teachers and other four colleagues are teaching staff of the UAIC Teacher Training Department and are responsible for the topics related with teacher training.

Students were selected from each studying programs from first-year students /freshmen up to Master's degree students. In total, 352 students were involved in a ReflectLab experience. The topics they worked on included human rights; challenges for young people on the job market; quality of life of young people, elderly, minorities or refugees; the preservation of life on earth;

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new forms of education and providing answers to contemporary problems of the world; indoctrination within the classroom; Deschooling Society (Ivan Illich); becoming a 21st Century teacher; adult education in today's society.

Most classes had 23 to 25 students, but three colleagues from the Teacher Training Dep. had to manage with 110 to 120 students and make them work in smaller groups. All ReflectLab classes used learning methods based on inquiry and organized small groups for reflection and debates. For that purpose, we used round tables rooms, or rooms in which we could move the desks and chairs. For some stimulus materials the use of the internet was indispensable, i.e. videos or movies. The faculty provides WIFI to all teachers and the students had personal accounts.

Before starting the classes, the teachers who implemented them were received preparatory training at two meetings. Relations were shown between different teaching theories or models which we are familiar with, and ReflectLab strategy. The training included IBL models and PBL theories (i.e., Piaget's constructivist model) and the RWCT teaching model, i.e. design lesson plans in three steps: Evocation, Common Sense and Reflection.

The teachers felt it to be useful to be reflective teachers all the time - be active learners and be aware about the students' behaviour changes during the class. Teachers proposed a European Association for ReflectLabs, for sharing best practices, as well as publishing articles and handbooks.

2.3. Implementing a ReflectLab during one block

Case 6: Leibniz University Hannover, Germany

Four lecturers experimented with dedicating one block of their class to the ReflectLab strategy. Topics included the EU crisis, migration and teaching civic education. All students were undergoing training for becoming teachers of civic education. Classes typically comprise 15 to 20 students and were split into working groups of approximately five persons.

In each class, one unit was used to test parts of the ReflectLab strategy: students received a stimulus material, had to investigate one topic during 3 hours, and shared their experiences. The rooms are fully equipped with WIFI and a projector; students use their I-phones or laptops to access the internet. In all the rooms for this number of students, tables and chairs can be moved and arranged for group work.

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In one class, students were invited to discuss their vision of the European Union in the year 2040, do the necessary research on available data, etc., and present their ideas. They had then one week of time to work on a short corresponding portfolio.

The advantage of this approach was that it detached very emotional discussions, e.g. about the Brexit, centralisation, etc., and invited to reflect about them considering the effects of decisions taken now for the future – a future which is in reach for the students and where they can imagine themselves in the position of working adults.

2.4. Rearranging different parts of a ReflectLab during the semester

Case 7: Leibniz University Hannover, Germany

The course on and against anti-Muslim racism took place during winter term 2018/2019 and was attended by approximately 70 students. Controlling students' attendance of classes is forbidden at the university. The course was open to students of social sciences, political sciences, future teachers of civic education, etc.

Given the very high level of racism and anti-Muslim attitudes among the population, the methodology was used in a specifically adapted manner.

(a) Mind maps: During the first session, students were invited to individually create two mind maps at the beginning of the course: one about their ideas and concepts related to Islam, and a second one about their ideas and concepts related to anti-Muslim racism. They were asked to upload these mind maps on a platform, and to keep them until the end of the class. During the last class, the students were invited to repeat the task and elaborate again mind maps on the same two topics.

(b) Reading materials: for each session, students had to prepare one academic text, i.e., they had to read it and answer one question related to the text. As a mechanism of control, each student has to upload his or her answers to four such questions / texts during the semester. This guarantees a minimum of students present in the class who actually know the text. The texts approached questions of definition and wording (islamophobia, anti-Muslim racism, etc.) but also structural racism (as visible in police violence, the NSU case, etc.) or violent incidents against Muslims (burning of shelters for refugees, violence especially against women identified as Muslims, etc.).

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(c) Portfolios: in order to acquire ECTS points, students had to elaborate a portfolio which included i) the mind maps elaborated at the beginning of the course; ii) the answers to questions of four of the texts, iii) the mind maps elaborated at the end of the course; iv) a short analysis (2-3 pages) about the personal learning experience. The mind maps and the difference between those elaborated at the beginning and those at the end of the course provide an indicator for the learning process.

(d) Stimuli materials: a variety of stimuli materials were used in order to activate critical thinking and confront students at different levels with prejudice and stereotypes they were not aware of. For that purpose, a broad variety of stimuli materials was used: for example, for forming discussion and working groups, in the different sessions the students were asked to count (rom one until a specific number, according to the number of students present, and those with the same number were asked to form a group. But this counting was done every time in a different language. The first counting was done in Turkish, a highly stigmatised language in Hannover. For this purpose, the lecturer explained some basic characteristics of the language system (grammar), read the numbers out (visible on PowerPoint), repeated the numbers several times with the students, and then asked them to count on their own and form the groups. The same procedure was repeated in a next class with Urdu. Students knowledgeable of other languages spoken in countries with predominantly Muslim population were invited to support this process during the next classes and broaden the knowledge of all students about the diversity of predominantly Muslim contexts. In the evaluation of the class, several students mentioned this as a method they appreciated a lot, and stressed how this had helped them to recognise the variety of Muslim societies and contexts and by that way broaden their perspective. Other stimuli materials included creative media productions of groups combating stereotypes and racism (e.g., the video “If racism was honest” by Die Datteltäter[1]), short texts written by Muslims about their experience of growing up in a racist context, etc. In one class, one group was confronted with a photo of a racist inscription in a male’s toilet on the campus (“burning of the Coran on day xxx on the campus of the university”) and were asked to think about possible actions they could undertake. The materials were used in order to increase the students’ awareness of the extend of the problem.

[1] https://www.youtube.com/watch?v=q8onp5KjqIs

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(e) Research questions: at the end of the course, students were invited to form small groups and formulate research questions for their examination. These questions were presented to the plenary and discussed. The curriculum foresees essays as the mode of examination. The students therefore had the opportunity to raise the topics they considered important and they wished to write about for their exam.

3. SWOT analysis of different applications

The following analysis of our experience with the implementation of ReflectLabs gives an overview of the strengths, weaknesses, opportunities and threats in each of the four models from the perspective of the lecturers and the students. This compilation of inputs from our test persons can be useful to compare possible approaches and choose the most adequate one according to the specific needs, circumstances and targeted students.

3.1. Implementing the ReflectLab strategy during a whole semester

From the perspective of the lecturers:

Strengths	Weaknesses
Possibilities for meaningful learning **Students increase their knowledge with stimulus materials, and they apply in practice what they are learning**	A difficult methodology to apply in large groups, there is a risk that not all students participate actively The organization of time can be difficult
Opportunities	**Threats / Challenges**
Application in real context (e.g., observation of effects of measures applied in educational centres) **Expert interviews or session with professionals (e.g., from these centres)** **Experimental approaches**	The application is not very effective in large groups - some students are demotivated and don't participate in the work dynamic Permanent reflexivity is challenging

From the perspective of the students:

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Strengths	Weaknesses
Deepen the knowledge of reality and apply this knowledge to professional work **The approach increases the learning motivation**	Difficulties of participation due to the volume of students. It was difficult to interchange with all other colleagues. Prejudice of participants
Opportunities	**Threats / Challenges**
At the end of the work process, students positively assessed the acquired learning and its ability to apply in practice, although during the development there were reluctant attitudes by some of them. **Active application of knowledge is motivating for students**	Traditional methodologies are convenient for students who have a passive attitude towards learning and do not have to have an active attitude during the session. The ReflectLab implies more work and less possibilities for disconnecting Research practices can be challenging

3.2. Applying ReflectLab during certain blocks of the class

From the perspective of the lecturers:

Strengths	Weaknesses
Stimulates independent work of students and develops / strengthens) critical thinking & reflection. **Allows educators to direct learning; the direction can be steered by selecting the appropriate stimuli materials.**	Search for and preparation of the stimuli materials can be quite time consuming It is unfortunate that some students are not independent learners, and whilst a ReflectLab wants to develop this skill, it also depends on students to have certain independent learning skills at the beginning The quality of students and the absence of a positive approach to their studies might be a weakness to ReflectLabs. The project assumes that students are actively involved in their learning process, but reality proves that it is not true in each case.
Opportunities	**Threats / Challenges**
To be an innovative lecturer in my own academic society is an advantage **The availability of easily adaptive guidelines**	Difficulty in implementing ReflectLabs at certain modules due to low attendance of students

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makes teaching and learning easier **Makes classes more attractive and engaging**	The formulaic nature of the curriculum prevents amendments to be made, and therefore it is difficult for ReflectLabs to be included. The nature of university sessions (direct input via a lecture, independent reading, and then writing of an assessment) does not lend itself to ReflectLabs, where more tutor-student contact is required. Lecturer needs to spend appropriate time at the beginning of the classes to fully explain the idea and background of ReflectLabs and the role of students, and has to make sure that it is understood by the participants. Otherwise students will not be able to fully participate in the ReflectLab.

From the perspective of the students:

Strengths	Weaknesses
Stimulus materials help to analyse the topic from various perspectives **Mind maps are useful for organising initial thoughts and ideas regarding a topic** **The range of media used for stimuli material appeals to a range of learners** **Students gained more self-confidence in their learning process** **A strong point of the project is the ability to choose the sources, according to your own preferences. The project gives a lot of freedom to act** **The main strength of the Reflect Lab project is freedom (…) there are no strict guidelines, thanks to which this project allows for free speech and chosen position in the topic chosen by us. Consultations were held, which dispelled doubts and in no way denied the decisions made. Only the argumentation of your proposals is important, which in a way teaches self-confidence**	Not all students find this method of work useful for them and helpful in their process of learning Mind maps are only one way of planning their thought process - could other forms be considered? Students felt they needed more time in order to consider the stimulus materials and discuss them in detail.

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Opportunities	Threats / Challenges
Topics of study are understood more in depth and from various perspectives **Students saw the benefit of working independently, and sharing ideas and thought processes between themselves. This was especially true for higher-level students** **An opportunity to reflect on the surrounding world** **Full freedom for students to choose the topic they care for** **The use on mind maps helps to organise thoughts in your mind on a given topic and at the same time to choose the most important aspects on which you want to focus** **This approach allows creativity** **When writing an essay, every little detail can be consulted with the lecturer, which makes the project better and more polished. Good communication with the lecturer is a key for success**	If the process of analysing stimulus materials, creating mind maps and working on portfolio is not linked to the formal assessment then students become reluctant to implement the ReflectLabs. For some students, the time they spent on developing mind maps and reading materials was seen as 'a waste of time'. This time they thought would be better spent developing writing skills for their final assessment Project failure related to poor student involvement Failure of the project related to the inappropriate conduct of the project by the lecturer The threat to ReflectLab may be the fact that the work will not be of a scientific nature

3.3. Implementing a ReflectLabs during one block

From the perspective of the lecturers:

Strengths	Weaknesses
Provides lecturers with the opportunity to direct discussions by the selection of the stimulus material	A difficult methodology to apply in large groups Time constraints are even worse than when applying the strategy during a longer period

Opportunities	Threats / Challenges
An innovative way to interrupt the routine of teaching **Create space for discussion and development of opinions by group work**	The application is not very effective in large groups - some students are demotivated and leave the work dynamic. The stimulus material has to be chosen very

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Lecturer can decide during the semester which topics are the most appropriate for making a small Reflect Lab, depending on the students and the dynamics among them	wisely

From the perspective of the students:

Strengths	Weaknesses
Increases the learning motivation **Good interruption of frontal teaching / listening**	Time restraints – in depth discussions are difficult to develop
Opportunities	**Threats / Challenges**
Allows more active participation by students **Interesting way of considering a problem / topic**	Less familiarity with colleagues – shyer students avoid interaction with colleagues

3.4. Rearranging different parts of a ReflectLab during the semester

From the perspective of the lecturers:

Strengths	Weaknesses
The different aspects of ReflectLabs allow innovative teaching and directing learning processes	As compared to a standardized ReflectLab, this approach counts with much less indications and guidelines
Active involvement of students	The lecturer needs to be very experienced
Learning includes both content and soft skills like group work, co-operation, developing argumentation, etc.	The lecturer needs to combine both a high level of self-confidence and permanent reflection and the willingness to adapt to situations as they arise
Applied wisely, it is a good strategy to counter dynamics of prejudice, discrimination, etc. also within the classroom	
Opportunities	**Threats / Challenges**
The different aspects of a ReflectLab can be considered like a tool box, applying them as	It requires high flexibility and a very reflexive

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needed due to the dynamics in the class offers high flexibility to the lecturer **Very appropriate for dealing with very conflictive discussions and dynamics** **Applied wisely, it attracts students to the class and increases attendance**	attitude from the lecturer Time consuming for the lecturer – the use of the tools offered by the "tool box" has to be adapted on a weekly basis (from class to class) Can be very exhausting for the lecturer Preparation is very time-intensive Time-management can be especially challenging

From the perspective of the students:

Strengths	Weaknesses
High involvement in the learning process **"Surprises" from session to session, not much routine** **You are exposed to a high variety of inputs – texts, videos, graphics, comics, etc.** **Interesting and never boring**	When you miss a class you miss much more than the text or theoretical input You have to be always active
Opportunities	**Threats / Challenges**
The mind maps at the beginning and at the end of the class allow you to see your own learning progress **You can involve yourself in many ways**	Requires a high level of involvement

4. Conclusions and recommendations

Our experience with ReflectLabs shows us that there are different ways of how to apply the whole strategy as described in the guidelines, only parts of it, or in a creative way, i.e. making use of all the tools it contains and rearrange them as appropriate. No matter which option you choose – you and your students will enjoy the learning and teaching experience. Make sure you consider the options available and the advantages and disadvantages of each. The best option depends on your students, your teaching environment, the topic you wish to tackle and your own temperament and teaching experience. Keep closer to the guidelines provided in the

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Manual for Lecturers and the Manual for Students when starting to implement the ReflectLab strategy, and feel free to experiment once you have gained experience and self-confidence in applying it.

ReflectLabs help to improve the involvement of all students into the learning process. However, large groups provide a special challenge for implementing the strategy. The success of a ReflectLab also depends on the wise selection of stimulus materials in an appropriate language. Searching for such materials can be time consuming. Time management is a crucial issue during the whole ReflectLab experience and one of your key responsibilities as a lecturer. Consider an appropriate way of giving feedback on the portfolios.

Consider also the recommendations of our colleagues:

- Having materials available in the dominant language of the university is crucial. Stimulus materials need to be updated, they have to correspond to the professional profile of the students and relate to the subjects they are studying.

- Students should not be overloaded with too many materials. Materials should be introduced incrementally. Begin with images rather than written text as a stimulus.

- Stimulus materials should not be more than two pages of A4 text for students to read at a time. This could be specific sections from journal articles or policy texts. Students also like have quotes/citations from academic texts which relate to specific conceptual and theoretical ideas.

- When including longer academic texts, ensure that a summary for the paper is included.

- Students should be encouraged to reflect about effective team working, to elaborate together the rules they wish to apply, and to agree on them. Instructions should be explicit and specific roles should be delegated so that everyone engages and contributes.

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- A spiral curriculum model of learning is useful. In order to achieve it, a model/framework for generating questions and provocations has to be generated that helps students get started with inquiry-based learning. They can then replicate or adapt the strategies when working more independently.

- ReflectLabs could definitely be utilised in schools with pupils. If working with pupils (possibly 14-18 years), then the materials would obviously be required to be adapted. There should be more of a focus on newspaper articles perhaps, on topics that they can relate to. Moving through the 16-18 year age group, the ReflectLabs may be a method in preparing the pupils for academic study; more academic texts could be introduced on a gradual basis.

- In order to achieve best success, the ReflectLab strategy needs to be smartly adapted to the needs of each group and mentor's expectations. It is an "open-minded" way of teaching. While the guidelines and materials provided by ReflectLab turned out to be useful, it is the lecturer's instinct and experience that determines the usage of each aspect of this project. Adaptivity is its biggest value.

- The ReflectLab strategy is very useful when dealing with topics that include moral dilemmas and social or ethical principles.

- It was useful to understand that we have a lot of work to do in the preparation of a ReflectLab Learning Activity, and to be much more reflective during our teaching. We have to be active learners also when selecting the resources for the RelfectLab class. We should not include too much or include any uninteresting study cases or starting points. It is very important to be precise on the assessment criterions – e.g., what should the portfolio include.

- It may be a good idea to split the stimuli materials into smaller chunks and start from 'easy read' or even visual materials (posters, cartoons, videos, photographs) first to engage students fully and gain their interest in the topic. It is best to introduce academic texts and more complex reading later on, so the students are aware of diverse perspectives and outlook on the matter/phenomenon analysed

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- Do not assume that students will be able to work efficiently in groups without your guidance and facilitation. Prior to starting group work it may be advisable first to discuss with all students how do they perceive effective group work and what are the strengths and weaknesses of peer cooperation.

- Mind maps were used to make a best possible decision on choosing the proper topic. Stimulus materials were used to develop the research question. Students worked in group to elaborate their ideas. Students were actively involved in the testing of ReflectLabs because they were given tools and could decide on how to use them. The most difficult part was the beginning where the lecturer had to explain carefully and patiently how to deal with this teaching strategy. The moment the main aspects had been explained, students had a clear view of the aim and the expectation they were supposed to deliver.

The ReflectLab team wishes you and your students all the best and every success in implementing ReflectLabs!

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Project partner

The coordinating partner is The Institute of Civic Education, which is part of the Leibniz University Hannover, Germany. The overall aim of the Institute is to enable both young people and adults to acquire key skills and competences necessary for active citizenship and participation at all levels of social and political life. IDD develops, tests and implements a wide range of training programs, all of which aim to improve the skills of trainee teachers and other education professionals. https://www.uni-hannover.de/ http://www.demokratiedidaktik.de/

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The Faculty of Education at Manchester Metropolitan University has experience in training teachers and education professionals. 3,000 undergraduate and postgraduate students study full time on over 60 courses each year. Another 1,000 study part time on professional development courses and research to PhD. The Faculty work in close partnership with over 1,500 regional schools, colleges and a wide range of other settings, providing students with diverse placement and learning opportunities.
https://www2.mmu.ac.uk/education/

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https://www.psih.uaic.ro/ - Faculty of Psychology and Education Sciences
http://www.uaic.ro/en/ - Alexandru Ioan Cuza University of Iaşi

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