Reflect Lab – Needs Analysis

Analysis on the needs for Implementation of Inquiry-based learning projects.

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General Information on the Project

Introduction

Democratic responsibility, critical thinking and the ability to work on ones own, can be considered as some of the most important attributes, which should be conveyed by university teaching. Especially in social sciences and concerning students within these fields of research, one may criticise how rare these attributes are findable. During times of a shift to right wing politicians and the so called “refugee crisis”, these skills gain even more importance. A strong focus on European citizenship and a critical awareness of happenings around the every-day-life of students, needs to be given.

A huge role comes to universities and the inherent structures of them. Students often complain about methods, being out of effectiveness and and the system of the university loosing more freedom and getting closer to school. The question that might be asked is, whether this is effective in enabling students to evolve such critical awareness. But how, if not with the classical types of university teaching, can those skills be developed in student’s minds?

One approach we suggest as the most effective one, would be Inquiry-based learning (IBL). This basically means that students need to work on a topic on their own, just with research assistants as guides. The work on a specific topic reaches from the development of a question, over the theorization, to the empirical studies. All these different steps are held within university, with the help of student tutors and research assistants. Part of this is Problem-based learning. (PBL) In this approach, teachers hand out specific problems and students need to find solutions on their own, with the help of the whole university infrastructure (libraries, computers, etc.).

One already tested way for facing the mentioned problems can be seen in so called Reflect Labs (RL). These Laboratories need to be structured and therefore designed for specific teaching purposes. Taking the concept of IBL as a model, in reflect Labs students are able to make use of the university infrastructure in working like scientists. They need to make up their own research topic, as well as the questions they want to deal with. On this basis, the participants can elaborate on the outworked quest with the help of scientific staff and the prepared material. The merit of this method can especially be seen in the way of working. Students just get help if they claim it. Major parts of this work is done on their own, so that students experience the value of their work.

In contrast, regular university seminars are either heavily teacher-centered or structured in a way that one student gives a lecture on one topic. In the case of a RL, a student does research on one question, which fits the overall seminar theme, but they substantially focuses on this question and does in-depth research. Structurally, this is similar to the work on a seminar paper, but in the case of a RL, specific supporting materials, methodological guidelines and support by lecturers are provided during a seminar.

In the course of this needs analysis, it is going to be elaborated on IBL. This means that different Universities, all over Europe, asked their scientific staff about their experiences with IBL and PBL. There are five different countries, having participated by using the questionnaires and therefore providing the material for this needs analysis. The participating universities were the following:

- Leibniz University of Hanover, Germany
- Alexandru Ioan Cuza University of Iasi, Romania
- Nicolaus Copernicus University of Torun, Poland
- Universidad de La Laguna of Teneriffa, Spain
- Manchester Metropolitan University, United Kingdom

The aim of this analysis is to detect the need for IBL and PBL at universities. What are the experiences on these methods, are they useful? Which kind of support do lecturers need in order to implement IBL and PBL and hence RL in their courses? The summary is followed by the detailed country reports.

Summary

In the course of the study, there were about 100 people to be filling out a questionnaire on IBL and PBL. In addition to the data, gained by these quantitative measures, 10 qualitative interviews were held to strengthen and elaborate on the raised data. There were many different people participating in the journey, taking the categories of Gender, Teaching experience, age and overall experience into consideration. One thing they all had in common was that they were university teachers of any status and that they as well had at least some teaching experience.

Concerning Gender, a slight majority of participants were female. According to this, it's even more surprising that the subscribers from the UK had a ratio of 17 to 3, whereas in all other countries it was divided by nearly half. The average of the participants in the topic of age can be seen between 30 and

35. Overall teaching experience had a big concentration in the time between five and 10 years, maybe also because of the young age of many participants.

As mentioned above, there has been a quantitative survey on different issues and how they could be tackled. First of all, every participant was asked about his*her personal data. Moreover, the questionnaire was made up for figuring out if and how the experiences with IBL and PBL were made. The exclusive views of scientific staff from different countries, enable us to think about appropriate approaches, which could be used for the development of university teaching and therefore also for facilitating students to evolve such critical awareness and European citizenship.

The first finding of the different reports is very coherent. In average about 40 to 50 percent already had experiences with the learning approaches. That's a low number, taking into consideration, that of those percentage many people had a incomplete impression about both concepts. Therefore, the result is even more devastating. Many people just used the concepts of IBL and PBL synonymously or weren't able to give a precise definition for neither of them. Some definitions were just not broad enough. But even people who have said that they had not made any experiences with those concepts, were able to say something concerning what they think about those.

Moreover, the high majority of subscribers wanted to know more about those concepts and also wanted to have more support in implementing those. This is very crucial, thinking about the answer which were given about the reasons for not changing to modern methods. In many cases the university infrastructure and the system itself, with the curriculum and less time for field studies were responsible for not letting new methods be integrated.

The people who had made experiences with one or even both concepts, just had made very good ones. Concerning feedback on the concepts – one might say that the wish for even a further use of these – the people were very keen on keep using them. Main results were for example that students develop critical thinking, as well as a further sense how to work on their own. Students are moreover longer capable of concepts they acquired in the course of these works. This is a clear sign that students working on their own, concerning a specific topic are more motivated, to elaborate working further. Another positive side effect was that people considered topics as not as boring as they actually thought.

As already mentioned above, there are other – just pragmatic - reasons, speaking against the implementation of IBL methods. The structure of studies in most of the European countries are one of the problems, especially blocking a further expansion of the time, needed for IBL. But besides, one main factor is that the methods and approaches are vastly unknown. As already pointed out, there are on average just 40 to 50 percent knowing what IBL actually is. Therefore, the majority of participants didn't know. Furthermore, there are more than half of the subscribers, not being absolutely sure whether they have used IBL in their classes or not. The problem of a precise definition – or an incomplete definition of IBL and PBL – as well as considering that both methods are just the same, can be seen as a lack of knowledge as well. This causes therefore a specific uncertainty in using these new methods.

Another point is the ability of using new methods and technologies, facilitating the approach of RLs. The vast majority in most of the survey said that they haven't heard about online tools or other technical devices, used in RLs. Platforms, such as Stud.IP or other university internal information systems are the most common ones, but still just known by about half of the subscribers. Due to these findings, one may say that the lack of knowledge, on the one hand about the methods itself, but also about the technical devices is considered by most of the participants as stronger than the use they have from IBL and PBL, although they think that both methods are very helpful and effective approaches of learning.

Claims

What we have seen in the analysis is that unfortunately – although the teachers at universities are mostly convinced of the methods IBL and PBL – they refuse to use them, because of the missing knowledge and infrastructure, offered by the universities. One quote, given in one report was the following: "[…] there is a gap in staff information and knowledge of the area that requires redress." Before this claim was raised, the university teacher, asked in this concern talked about the positive effects of IBL and PBL and why university staff still doesn't use it.

The finding that effective teaching fails as one reason, just because of the lack of knowledge and information leads to the proposal to spread the idea further. One way of doing that could be an online tool, bringing information about the two approaches where they are needed. Several information and

experiences, gained by faculties having dealt with those methods for a long time, could be shared via internet, brochures, leaflets and as well in seminars. The most effective way to bring these information across the European union would be “Webinars” – Seminars which can be seen worldwide.

Those “Webinars” are small teaching videos or “Web-Seminars” in which the principles, as well as the most crucial points on both approaches are given. These Videos also need to be about the different methods, as well as further information on online supporting tools. Those tools do not even need to be evolved or invented. There are several online platforms, which are free to use. Examples are stud.ip, moodle, google.docs, google.drive and many more. Besides the Webinars, it is also useful to produce a handout on the frequently asked questions and the overall idea of RLs. This will be another output within this project.

RLs are an established method at the universities of this consortium. In Hanover, the project once started as the so called “Politik-Labore” for pupils out of the region of Hanover. Within this project, they had the chance to see a day of university work and how science, especially social sciences, work. The experiences gained due to this project were very positive. Afterwards, the concept was refined for university students. On this basis, the consortium will develop several RLs, improve this method and work out a guide for an effective implementation of “Reflect Laboratories” which can be applied to different faculties, all over the world.

A problem, which can hardly be solved by the project group, is the curriculum. On the one hand, it got clear within the questionnaire that teachers think that they have neither time, nor the money for the implementation of IBL/PBL learning standards. Nevertheless, it could be helpful to try establishing it within the given circumstances. The consortium will face this challenge during the course of the project. With the support and results of this project, we would like to encourage people on spending time with RLs and using the approach in their teaching. The material we are going to work on are meant to facilitate the work of teaching staff

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1. Background of the Participants

The examined data, rely on qualitative Interviews with 20 different University teachers, based on an online survey, as well as 2 Interviews, going further into detail. The range of different participants is vast, as well as their background. Going hand in hand with these facts, their experience with inquiry-based and problem-based learning vary, as well as their general experience in university teaching vary. In the following this report is going to point out in which aspects, one can find the highest and in which the lowest differences between the participants, preparing the further examination of these data.

There were 20 university teachers from Germany participating in this project. 8 of them were female and 12 were male. Therefore, more males than females answered this sheet. Concerning the age there has been bigger difference between the participants. 6 of them put themselves in the category of an age between 18 and 30, 13 participants were between 31 and 50 years old and there was just one person participating, with an age over 50 years. One question also wanted to know which position the participants have within the university - 17 people, having given answers were employed as "Wissenschaftliche*r Mitarbeiter*in" or research assistant. One person gave the answer that he is working as a "Dozent" or ordinary University teacher, one person already entered the stage as a post-doc and one person participating in this survey has given the answer to be an "Akademischer Rat auf Zeit" which is basically almost the same as a Junior-Professor or a higher research assistant.

The last question concerning their personal data was about their overall experience and more specifically their experience in university teaching. Concerning these questions 19 people said that they already gained experiences in teaching at all, and at least 18 said that they do have experiences in University teaching. This schemata doesn't work the other way around – the remaining one for the first question and the remaining two for the second didn't say that they don't have experiences in teaching at all, but just didn't give any answer to the question.

Moreover the subscribers were asked how many years of experience in teaching they have. All in all 8 people do have between zero and two years of experience in general teaching, as well as 9 people also have two to 10 years of experience in this general field. Just one person has over 10 years (22 years) experience in general teaching. Furthermore there was one user who just gave the information that he has experience, but gave no disclosure to how long it has been. The second column, concerning the

experience in University teaching is a bit different from the general teaching experience. Of the 19 people, having answered this question, at least 6 have from zero to two years of experience, teaching at a university. The peak with 12 people is reached within the column of people having experience of between two and 10 years. Once again, there is only one person who has over 10 years teaching experience.

Overall the numbers which were given in the column of university teaching experience are just as high as the numbers, given for general experience, or even higher. Putting the focus on the move of numbers within one category, choosing the category of two to ten years there are at least three participants, having given the information that their teaching time enlarged, being asked for university teaching experience, on an average of at least one year. Moreover there are 3 subscribers wandering from the lowest to the middle category of experience. Whereas there has been in the experience category from zero to two years in the general question, they shifted on an average gain of two years to the second category of two to ten years.

Finally one can greatly see the link between the age of the participants and the years they have been teaching in universities. Whereas those in ages between 18 and 30 do have one to two years teaching experience on average, those with ages between 31 and 50 do at least have 5 years of teaching experience in German universities. On the other hand the person with the highest age do also have the longest experience both in general and in university teaching. (22 years)

To put it in a Nutshell, the participants of this survey are more commonly male than female, do work in most of the cases as “Wissenschaftliche*r Mitarbeiter*in” or so called research assistants and on average have general experience of four to five years in teaching and even more in university teaching. In the next chapter this report is going to give an overview over experiences with inquiry based and problem-based learning strategies.

2. Experiences of the participants with inquiry-based and problem-based learning strategies

In this chapter the report is going to examine on the experiences the participants have made with inquiry- and problem based learning in real life teaching. First they were asked whether they have ever made any experiences with these special learning methods. Afterwards they were made to give their own definition of on the one hand inquiry based learning and on the other hand problem-based learning. In both cases the ideas are going to be analysed.

Concerning the inquiry-based method, there were 15 people, who haven't made any experiences and five who did. Moreover, one can't see a direct impact of gender or age, on whether they have made any experiences in this field. The own definitions, given by the participants vary widely. The range goes from, leaving the children in doing research without any rules, to a school external approach, concerning the action taking of children in school. In parts, these definitions can even be contradictory. So does one of the subscribers say that the inquiry-based approach for him is: "Lernweg unter Anleitung selbst konzipieren"[1] or the self-conceptualization of learning, based on given rules, another says that for him, the approach means "Interaktives Lernen, ohne strikte Vorgaben zur Recherche durch den/die Lehrende", basically meaning no rules and researching on their own.

The second method, examined on was the problem-based approach. Due to the questionnaire, there were 10 participants who had never made any experiences with this approach, whereas five did. The spare five made no choice on this request. Also in this approach, how wide the definitions goes, varies from participant to participant. They have given very vast definitions, such as: "Eine Didaktische Strukturierung von Lernprozessen, an deren Ausgangspunkt die Auseinandersetzung mit Problemen gestellt wird." This basically means that in every process of acquisition, a problem needs to be the beginning. Moreover, another definition, given by a different participant shows even further details of such a view on the problem-based process. That partricipant points out that: "Das Problem steht im Mittelpunkt […] in gewisser Weise interdisziplinäres Lernen, also das mehrere Subdisziplinen gemeinsam, statt nebeneinander erlernt werden." There he puts the way of learning into the focus of the problem-based approach. But furthermore, he takes into consideration that many different fields of knowledge are required to solve the specific problem and therefore needs to intermingle and be combindes by the user. That has the effect, that one doesn't just see the problems separately, but as a whole and therefore evolves a better understanding of what work between different disciplines basically means. Summing this up, the participants in general understood the problem-based approach as something in which the problem needs to be focussed and then tackled by the pupil. The conflict shall be the ordinary, but not a special situation for them. Therefore they learn to deal with problems and situation in which they face some, as well as they learn to deal with different ways and methods to solve them.

Unfortunately all of the participants took these two approaches as single and just standing for their own. None of them had the idea to connect them or even make use of their knowledge about one of these approaches, to support their own definition of the other one. Another problem we were facing was that all of a sudden, just the people who said that they have heard about these approaches, or

[1] Every Quote, used above, is not changed by the authors' content wise. The only corrections might have taken place in means of Grammar and spelling.

even do have experiences with them, gave information about their own definitions. The other people just left these columns spare, within the questionnaire.

Finally, there are different findings, which can be taken out of the citations given above. On the one hand that merely the minority of university teachers have ever experienced anything of those two methods, which is actually a shocking fact, knowing what merits those methods offer to them and their students. On the other hand, that definitions vary vastly. One can't say that there is one specific definition, being available or valid for every person which has filled out the questionnaire. Due to the findings that these methods are not so commonly spread within the German university teachers' community, one may put his*her focus on whether and if yes, how these ideas might be spread, or taking it more into detail first – Whether there is demand to spread it from the side of the university teachers. In the next chapter the report is going to elaborate on exactly this question.

3. Demand of University Teachers on new Methods

The things we discussed above are not that noteworthy for taking action or developing new things to improve university teaching and teaching in general. In this chapter, the findings of the last questions asked in the questionnaire, are going to be discussed. These had the main focus on the needs of scientific personnel, based both on their experiences and the methods of the projects at all.

First of all, they have been asked whether they have had good or bad experiences with these methods. To give an answer to this question, it was necessary to have any experiences at all. Therefore 10 people gave their opinion. The first person said: "Ich betrachte eine entsprechend lernerorientierte Didaktik als Grundlage dafür, dass Lerner entsprechend intrinsische Motivation gegenüber dem Lerngegenstand entwickeln und daher tatsächlich aktiv lernen." Meaning basically that the focus on learners, given by the methods pointed out above is maybe the most crucial point for teachers to have. Just due to this closeness to their realities, they may build an intrinsic motivation and therefore start learning on their own. Another subscriber pointed it out on a way, being more focussed on university students: "Zentrale Erfahrung, Abhängigkeit des Lernerfolges von der Motivation der Lernenden." Which can be translated as the experience that students are not willing to take scientific responsibilities, until they are motivated to learn. As ways out, he depicted the following: "Akademisches Selbstbewusstsein stärken, Grundlagenwissenforschung stärken." He claims that it is important to strengthen the motivation of the students, by giving them a more explicit perspective in science. To put it in a Nutshell, the request for more methods, intensifying the motivation of university Students is clear, the experiences has been good. "Ich habe die Erfahrung gemacht, dass durch die

Methode des eigenständigen Arbeitens und Erarbeitens durchaus Studierende dazu motiviert warden, sich längerfristig mit einem Thema zu beschäftigen und sich demnach auch besser an Erkenntnisse zu erinnern.“ This statement, made by Interviewee no.2, in which he claims that he made the experience that students are more willing to invest time and effort in research and specific topics, can be seen as the model answer and the average of the findings on this questions.

In the next question the participants were asked to give disclosure about whether they would wish to have more support for taking action in those inquiry-based and problem-based approaches. 10 of them said that they wanted to, three didn't want to and 7 didn't give a specific answer. The people wanting to have more help with those forms of teaching were split up in two groups. Four of them said that they are sceptical, whether there is space for such support in our system or that it depends on the situation they are in. The other 6 were absolutely excited about the idea of having help in these concerns. Therefore they absolutely wanted to have this support. Besides, the three voices who chose no, are also split up. Two of them just didn't want it, without any further explanation. But one person said that she is already very well equipped with material and the necessary things for realizing such a concept. Therefore, the critique and not wanting to have further material can also be based on the material, different universities do already offer.

With the next question it was aimed to point out whether the teachers already know different forms of online methods to help students in doing their studies. The answers are really in a balance. 6 people did say that they know different methods, 7 said that they don't and the 7 spare didn't give an answer. The people, knowing different methods were also asked which programmes they know and use. The most common program below the participants was moodle, an online chatroom and database, having been named by four different people. Moreover the platform ILIAS, Stud.IP and Iversity has been named by the participants. ILIAS is an online testing system, whereas Stud.IP is again a mixture out of chatroom and database. Iversity nonetheless, can be used for evaluations of students at the end of every semester. The seven people, which didn't know any of the platforms, unfortunately didn't give any reasons or at least clues how they work, neither.

In the next question they were asked to use the SWOT method for an evaluation of the qpproaches used at the faculty the university teachers teach at. The answers to this question differ. Many of the teachers point out that the capacities, their institution offer are very low. Therefore, there is money, as well as the innovations missing. But one argument is present, in almost every answer. For depicting this, I´ve chosen one: “Es gibt sicherlich nur Chancen.” Which means that almost every teacher sees the chances which are given by new methods. But structurally, new approaches are problematic. One subscriber for example gave the answer that: “neue Lehrmethoden werden zumeist von den Dozierenden individuell umgesetzt.” So the structure of their universities allows them to make the best

out of new opportunities, but doesn't especially support innovation. Another participant complais for example about the willingness of some universities, just to invest money and time in research, but not in teaching. He points out that: "Lehre wird im Unialltag viel zu randständig betrachtet." A complain about the financial situation of teachers. There is all in all no clear picture which can be drawn for the systematic support of teachers in universities. Tendencies are – that there are no sufficient financial resources in the universities to allow good teaching.

Concerning the mourning of the teachers, depicted in the previous chapter the participants were asked, whether they can somehow fix the grievances in their institutes. The claim for a general change of the system has been raised in this case. Parts of these change could be seen in different answers, given by the participants, such as less work in teaching for everybody and therefore more Jobs, splitting the work, Student teachers, supporting the ordinary teachers, a generalization of teaching methods and the intensification of communication between the single teachers, as well as a better education and preparation for teachers at universities. But some others are more sceptical and don't believe in it, at all.

As a final question the teachers were asked, whether they have gained any experiences in inquiry-based learning, or problem-based learning, using the definitions, given in the questionnaire. The results are pretty straigt. The main claim is that inquiry based learning, aiming the intrinsic motivation of the people needs to be the target of every seminar. This is consensus, as well as for example the problem they face in doing this. Mainly named are heterogeneous and uninterested groups of students. In most of the cases, these problems are faced by giving close criteria in which the students are free to work.

To sum it up, one may say that the challenges we face are huge. The wish and the claim for new technologies, supporting the teachers at the universities is huge on the one hand, the interest of the universities for structural changes is limited, on the other hand. One option for change is an internet-based module which can make work between teachers easier and friendlier for students to work in these courses.

4. Summary

In this paper, we elaborated the findings of the questionnaire, given to 20 different University teachers of different stand and position. To sum it up, the main part of the participants were male, employed within the university as research assistants and hat on average 5.5 years of teaching experience. Most of them as well didn't make any experiences neither with inquiry-based learning nor with problem-

based learning and therefore had a wide range of possible definitions which could be fitting. One of the mayor problem was that the definitions given by the teachers were mostly just consisting out of one part of the whole definition, dealing with one specific aspect.

Concerning the question if they wish to have more support, the answer was a clear yes. Most of them didn't know any platform, intensifying and simplifying the learning of university students. Therefore, creating a platform would be an option, together with the opening of this platform for everyone in every university. That would solve one important point of critique, which has been raised permanently by the participants – That teaching is considered as not that important, compared with research work.

Most of the people, having participated wish to have more possibilities within the university and also wish to get more support from the different from the administrational side. One piece of this support could be the Project "Reflect Lab" We are currently working on. As we have seen – There are many teachers, already working with pieces of the techniques, being offered by our project. There are also some which haven't ever heard of the techniques. The aim could therefore just be to focus and elaborate on the knowledge, already available and to strengthen the investigation on new methods. "Reflect Lab" could in this category be the chance for evolving a new generation of teaching, strengthening the involvement of students and help them in processes of emancipation and lifelong learning. Platforms and Internet tools, as well as so called "Webinare" are innovative methods for teachers to use.

Metropolitan University of Manchester – United Kingdom

Manchester Metropolitan University

1. Background of Participants

The questionnaires were administered to all social sciences staff working in two departments of the Manchester Metropolitan University, United Kingdom: Interdisciplinary Studies and Education Studies. As this is only a survey of one institution, and two Departments within this, it cannot be said that this survey represents a national picture but is a snap-shot of the knowledge of some staff within MMU, who teach social science based subjects. It does provide an insight into typical experiences of Inquiry Based Learning (IBL) and, specifically, some of the misunderstandings about this technique and the potential obstacles in using IBL within UK higher education social science subjects. Similarly, two interviews were undertaken on the basis that a. the respondents were happy/had time to be involved later, b. that they had sent their details to us to indicate interest. We carried out the two interview, which followed the questionnaire schedule to gain more indepth information about IBL and other similar forms of learning and their experiences. These are presented here, within the general survey data and for clarity, are introduced to the reader as being interview-based material.

Using the template of questions provided by the Reflect Lab Project University of Hannover colleagues, we invited all staff with social science background from Interdisciplinary Studies and Education to take part in the questionnaire Online. The questionnaire was made fully anonymous with respondent choice over whether to contact us with further details. The staff were invited to respond to an 11 question questionnaire, which had some fixed quantitative questions but also qualitative open-ended questions with comment boxes.

Description of the Survey Respondents and Interviewees

Twenty survey responses were recieved, three of the respondents who took part in the questionnaire identified as male and seventeen identified as female. This gender balanced reflected two key facts, a. the general female-based gender composition of staff in UK universities who teach social sciences, and b. the staff gender balance within those departments in general, which again is female. In terms of job title, most staff selected that they were at associate lecturer, lecturer or senior lecturer level, with only two principal lecturer/reader level respondents. In order to clarify the status of these staff a table is given below of the roles and duties of different levels of staff within UK HEIs.

Professional HEI Teacher Grades in the United Kingdom		
Title	**Grade**	**Duties**
Professor	11	Primarily Research and Knowledge Exchange, teaching load, circa 30% of total time.
Principal Lecturer/Reader	10	PL. work distribution depends on portfolio - teaching, administration, research – circa 70% teaching load. Reader, teaching, administration - circa 50% teaching.
Senior Lecturer	9	Lead on Teaching, Programme leadership, administration of courses, 80% teaching.
Lecturer	8	Primarily Teaching duties, circa 90% teaching.
School Tutor	7	Administration, community engagement/development, teaching, placement visits - 100%.
Associate Lecturer	6	100% teaching.

The age range of the staff who responded to the survey was between 30 to 62, with a mean age of 50, the respondents having a range of experience working in teaching at MMU, from 4 years to 27 years. The majority of these staff, thirteen (out of twenty), identified their staff level as Senior Lecturer (grade 9). As noted above, the Senior Lecturer grade is mainly teaching based, with teaching leadership roles and administration and typically around 20% time on research, scholarship and knowledge exchange. Three staff (out of the twenty respondents) were School tutor level (grade 7), a specific staff role within Education Studies, which involves a host of academic activities. Two staff were at Principal Lecturer or Reader level (grade 10), roles that have less teaching than Senior Lecturers and more management and research time, respectively. Two of our respondents had associate lecturing roles, which is a 100% teaching role, typically face to face with some blended learning, during a usual term. It has to be added that these 'typical' role descriptions can differ as there is also extra research time allowance given for staff who are performing well in this area and who are expected to help meet university targets for quality research output and achievement overall. There are also differences in the composition of university staff role between UK institutions, which also should be borne in mind when thinking about teaching duties across the UK.

To sum up the social features of the questionnaire responses, surveys were submitted primarily from female staff, who had worked for a variety of periods of time within MMU and all stated they did have teaching duties within the University. Age wise, the group could be defined as middle aged but we captured a wide variety of experience of teaching within the sample in terms of length of time as an HEI teacher. There was no correlation between age and length of time teaching in higher education visible in the data. This probably reflects the way that many people enter Education Studies HEI teaching at later ages, often after first careers in primary and secondary schools as school teachers or managers.

As planned by the project team, two interviewees, were selected at random to provide a more indepth insight into the questionnaire answers; these were one male senior lecturer of Sociology (aged 60) and a female senior lecturer of Childhood Studies (aged 37). These interviews had been in post at MMU for 19 and 6 years respectively, they both had responsibility for subject areas and had experience either at MMU or in previous posts in HE. Their quotes are used within this document to illuminate further the issues raised in the overall survey findings.

2. Experiences of the participants with inquiry-based and problem-based learning strategies

A key finding was that 40% of the survey respondents claimed that they had experience with IBL. There was no significant gender difference in those who said they had and they had not used such methods. What was interesting was that when asked to describe what the term meant to them, most staff appeared to not understand the actual concept in any depth, *'Exploring a concept to lead to an answer rather than being told by a teacher.'* Here, the respondent did not outline who identified the concept but instead focused upon the exploration part of what they thought this concept was about, similarly respondent X said that IBL was, *'Allowing students to investigate solutions for themselves.'* Here again, the respondent did not outline any methodology for this process, instead vaguely indicating that students would lead the work to find a solution on 'some' problem or other.

A small minority of lecturer respondents appeared more confident with the term IBL, often pinpointing a different power relationship within this form of pedagogical approach in the classroom, *'IBL is a process of problematising practice for the purposes of shifting perception in pedagogy and informing practice. It is done with student teachers not to them.'* However, even within these comments, there was an absence of a demonstration of understanding of broader use of IBL as techniques that could transcend HEI teaching to empower students to work with these methods in future post-graduation, for instance when working in schools, adult community learning, work places or youth environments. Given that 13 respondents worked within Education Studies and the rest in Social Science disciplines that have high numbers of student occupational destinations in teaching, youth and community work, social work, NGOs and other 'people' settings, it was odd that no respondents made the connection that this pedagogy was a transferable learning method for students to use post-degree. There also seemed to be general misunderstand as to 'who' set the question under study, with this either avoided in comments or implicitly being discussed as staff-led or staff-initiated.

> *"IBL is posing a problem to students that they then have to work out or resolve. It could be a case study that develops over time with new information to deal with."*

In the typical quote above, which was from a respondent who indicated that she believed she knew what IBL involved, the emphasis is placed within the answer upon the 'posing of a problem' but implicitly that posing is presented as coming from the staff member. Similarly, many respondent answers that stated that they understood IBL were not far from the correct idea, but the staff seemed to have confused IBL for aspects of problem-based learning.

There were two respondents who seemed highly confused about IBL, despite stating they had used it in their teaching and their answers demonstrated a complete lack of understanding. For instance survey respondent 19 said, "I understand this to be a form of interpretative methodology, a research method." Whilst IBL can involve research methods and helping students deploy these to understand their self-identifed areas of interest, it is not a research method in and of itself. This particular respondent had ticked that she did know what IBL was and had used it. This shows that HEI staff who see themselves as pedagogy-savvy, can be confused about what IBL is and even about whether they have actually used it themselves. Adding these 2 mistaken respondents answers to the 'don't knows' gives 7/20 of respondents over all who did not know what IBL was. Adding this total to the 'not sures' give us 13/20, which suggests a paucity of understanding of the concept and what it involves. In other words, there is a gap in staff information and knowledge of the area that requires redress.

Unsurprisingly given the answers above, those staff who stated that they has used in their teaching struggled to give examples of how it had been used. Again, these were often vague, muddled with problem based learning and unclear.

> *"I think I actually have used it, where students in groups decide on a problem and then go off and research on it and come to some conclusions but I never had a name for this and what we were doing."*

The response above underlines an interesting situation where some staff thought they 'might' have been using IBL techniques but without knowing its name and therefore with no justification of why this pedagogy should be used and not another. Given the importance of knowing why we use pedagogical techniques and the current day importance placed in European HEIs on justifying the pedogogical rationales behind how we teach, this is an interesting finding. 'I do it but I do not know why I do it' would be unlikely to be seen as acceptable on formal quality documentation or submissions on choices around pedagogical methods in any HE teaching institution in the UK.

In a question asking about the understanding of IPL, 71% of staff indicated that they did use this type of learning and they knew what it was. 19% and nearly 5% said they did not know what IPL was or were not sure, respectively. However, despite the large number of responses that indicated staff did use these techniques, the respondents still seemed confused over exactly what it entailed. If anything,

confusions over IBL and PBL, as overlapping concepts, became even more visible in the responses about Problem Based Learning (PBL). Three respondents who indicate that they used this approach themselves, focused upon assumed similarities with IBL, with respondents noting for instance, *"[It's] Very similar to IPL I think .... these 'labels' all seem very similar problem/inquiry/enquiry based learning*" and likewise another respondent noted, *"I see this as synonymous with the approach above* [meaning IBL]". However, in the main respondents could identify that IPL was a staff directed problem-related group task, in which students took the problem generated by the tutor and worked through it,

> *"[It's] learning through a problem. I have used this in teaching French to look at the problem and work through it, from locating and figuring out grammatical structures to understanding vocabulary and concepts to constructing sentences that meet marking criteria. As a lecturer, this is more interesting and can be used to really explore a concept and create some critical awareness of it."*

> *"I have used it when teaching about multi-agency working. Giving the students a real life scenario in the form of a case study to deal with."*

The idea of a tutor setting a problem and then students working through it to find answers and resolutions, was commonly understood by most of the respondents to be a mainstream pedagogical method that could be used in social sciences to enhance student learning. It was something they did 'everyday' and as mainstream teaching activity.

> *"Used in seminar discussions / directed studies to encourage reading and critical thinking and debates in class".*
> and,
> *"This is more like workshops where we might set a problem. The problem comes from the tutor side, not the student and students work on that together to find answers. We also do this with group projects in second year".*

There seemed to be greater familiarity and comfort in tutor-led inquiry, as one respondent noted, *'Setting parameters is key here, guided by student competencies and resource constraints'.* PBL allowed the tutor to author these parameters, to set them in ways that made them more confident that students would stick within curriculum and meet fixed unit learning outcomes. However, despite most of the staff indicating they had greater familiarity with PBL, there were still some staff who said they did not know what it was or were not sure (20%); again suggesting the need for further training and support in understanding this form of pedagogy.

The interviewees' accounts on the relationship between IBL and PBL, supplemented those from the survey. The male Senior Lecturer outlined that he had struggled to answer the questions,

"I started answering the first question on IBL on the survey but then when I realised the next one was on PBL, I suddenly felt unsure which type of pedagogy I actually use … I have never thought about what I do in this way before, but I suppose it is more like PBL really as I give students a question to work from." [Interviewee 1, M]

The female senior lecturer was clearer that she only used PBL and not IBL,

"I think you would be hard pushed to find someone who does use real IBL as defined because we don't always get the time in the teaching sessions and I think it needs time … setting a problem is easier because you do keep some control over direction" [Interviewee 2, F]

Both interviewees implicitly note in their comments that the issue of staff not really understanding the concepts of IBL and PBL is an important one, interviewee one pointing it out from his own experience and interview two indicating that very few people use 'real IBL', suggesting that staff do not necessarily use the technique in a true or purist way at MMU.

3. Demand of University Teachers on new Methods

There were 15 responses about the positives and negatives of IBL and PBL from the survey respondents. All were able to cite positives and negatives of doing work in this area. Positives were seen to be primarily about the opportunity to encourage students to be more independent and to become critical learners through using inquiry or problem-based techniques.

"The positives are that students who do engage in student-led sessions are able to use feedback/critical thinking feedback to enhance their own studies. Positive feedback has been received from students who take part and the experience counts towards employability - transferable skills."

"it allows me to 'tune into' their thinking, understanding and they sometimes surprise me with their creative ideas."

Both types of learning method tended to be discussed together by respondents and the terms IBL and PBL were commonly used interchangeably. However, positives were seen as these methods encouraging more critical thinking in students, students being able to see how their own work led to finding solutions and the methods giving students greater depth of understanding of issues they were studying. It was also clear it was more 'fun' and rewarding for the lecturers, as comments focused upon being able to witness students being more innovative in their learning, using creativity in their group work in IBL and PBL and engaging with class activities more.

However, most respondents also noted negatives in using PBL and IBL, and these often did relate to the issue of engagement. Half noted that there were problems often with students not taking seriously what they were being asked to do.

> "Some discussions have developed but students remain tentative about the value of their opinions and ideas. Reading is not a big enough part of how they see their ideas and expertise developing. We have a long way to go to get beyond the 'tell me what to do' expectations."

Attitudes towards learning were still very much weighted towards student as empty vessel but staff argued that it was students, not lecturers, who often preferred this model and wanted to be directed in their learning by staff in prosaic ways.

> *"Negatives are it is hard at first to convince a group students working together that they have to do the work in finding out and then coming back with results"*

The respondents all felt that students needed to be taught how to understand different forms of pedagogy and see the value in working on problems in groups, rather than being led by the lecturer. Without this teaching of why IBL or PBL was important, many envisaged facing resistance from students over why they were being taught in that way and what the point was of the approach. The 15 respondents who answered this question, acknowledged there was a long way to go in getting both staff and students to recognise what IBL or PBL could offer and the skills they developed. There were two other comments about students paying students fees and expecting to be 'taught' in traditional ways that they recognised from high school. Moreover, three participants noted that there was a pressure to overly oversee teaching to make sure that it did not go 'off track' and therefore negatively impact upon assessment and attainment. However, overall the respondents said they had experienced positives where they felt they had integrated IBL or PBL into their teaching work.

Interestingly, the question about wanting extra help or support around IBL or PBL was only answered by 12 respondents (57%) out of which only 5 said they did want to find out more. In general, it was those who identified they already used these pedagogies who wanted to find out more, whereas those who indicated that they did not use it, likewise did not want to find out more. It is hard to interpret why this might be, but perhaps if you already use a pedagogy there is a wish to get better at doing so, whereas those who do not use it yet might feel there is not a need to do so.

The interviewees elaborated on positives and negatives of using IBL and PBL. Interviewee two noted that,

> *"when it works well, it can work really well and especially the stronger students can really fly when given free reign … that said, I have never really done full IBL I don't think because I always set the problem or issue and so I am not sure how giving total choice and total freedom would work … a negative can be students who just don't take it seriously and mess about, don't want to do the work" [Interviewee 2, F]*

Here interviewee 2 indicates that there might be differences in how students do with this type of learning according to their relative strengths in their subject areas. This was not noted by other

respondents in the survey. Interviewee 1, focused mainly on the issue of getting student buy-in when discussing negatives,

> *"Students can be very difficult if you do something different that they don't expect. They can get quite arsey [angry], if you don't spoonfeed them … but if they did more learning where they actually did something themselves perhaps they would be more accepting and get better at this."*

Students appeared to be a dominating factor in how teaching and learning happened according to the interviewees. Problems of resistance in the classroom, refusal to engage did worry both of the interviewees in terms of implementing changes in pedagogy.

a. E-Tools

Most survey respondents skipped this question, with only one answer noting that the respondent thought that Moodle could be used to map IBL and PBL pedagogy. However, no further information was given.

b. SWOT Analysis

Respondents were asked to identify any strengths, weaknesses, opportunities and threats (a traditional SWOT analysis) to IBL and PBL being used within MMU. The main strength identified were that such methods added to the variety of teaching methods open for all staff to use, therefore stopping teaching becoming stale from use of traditional methods. Another key strength was the skills that IBL and PBL were thought to develop in students, "Strengths are development of communication and problem solving skills. It promotes active and experiential learning." Despite these recognised strengths the respondents could see some weaknesses in injecting new methods into the systems.

> "a weakness could be parity of provision. Are all students going to get these opportunities to learn in this way, if not, which ones? Parity between classes, different lecturers would be a problem"

None of the respondents indicated opportunities but it is possible that is because this was a long question to be asked and they may have thought that this was covered in strengths. Threats however, were identified and these included, student negative attitudes, cultural attitudes within the University towards teaching as something carried out through lectures and seminar formats only and difficulties of meeting institutional expectations about assessments, fixed learning outcomes and following unit documents schedules. In other words, the respondents saw three key problems in terms of audiences, a. students as 'consumers' of higher education, b. lecturers and the culture of teaching and learning they were used to and finally c. the institution as a pressure upon lecturers and students to perform in specific ways and to be measured in relation to this. These three audiences for teaching and learning

place pressures on how teaching is done, perceived, valued and understood. In general, the respondents felt that making changes within the traditional systems of pedagogy was difficult and that any departure from the norm was not always well received by these three audiences, thus stifling innovation and new ways of working. Another key threat noted by four respondents was that a great deal of teaching was undertaken at MMU by lower level staff, Associate Lecturers and others, who they felt had the least access to training in teaching and learning and also support. Therefore, although Associates, often being new to teaching, might be keen to integrate new ideas, the structures of the University might prevent them being able to do that.

In terms of overcoming or mitigating these threats and weaknesses, the respondents offered a variety of ideas. For instance, three respondents said that IBL or PBL could be demonstrated to other staff and students, thus showing how it worked and removing some of the fears and concerns about using these methods. Staff training and development was identified as a key issue, *"[Weaknesses could be removed] By including teaching in staff development days where there is time to discuss together and plan accordingly." In addition the point was made that training could help, "Implementing introductory PBL and IBL programmes for all teaching staff. Signposting staff to relevant online training to refresh skills"*. Another suggestion was peer-training support, where staff supported one another in using these forms of pedagogy, with one respondent noting,

> *"[Weaknesses could be removed through] Through exemplification - one subject use the model successfully and share this practice (and provide coaching support for other subjects to implement)"*

Working together, sharing knowledge and staff peer support were all positive suggestions to getting around the weaknesses. However, a minority of respondents remained sceptical about what could be done to remove weaknesses and threats in using more IBL and PBL at MMU. *"Not a clue. More staff, more money, but that will not happen."* This was the only negative response out of the 18 respondents that chose to answer this question. Interestingly, despite having mentioned lack of student understanding earlier in the survey, no respondents talked about helping students to understand IBL and PBL as a method of teaching or undertaking development work with students to remove obstacles in their understandings.

As with the other survey respondents, the interviewees found this question quite complex and multi-faceted. They were prompted to talk about all aspects of the SWOT question, to try to draw out key issues and like the surveyed staff strengths identified were about critical thinking and learning and doing something fun and different.

> *"Critical thinking is area that I think you see the benefit in for the students and their development. If we used more IBL or PBL then students would have more enquiring minds and approaches themselves, rather than relying on us providing the perspectives.' [Interviewee 2, F]*

Creating 'thinkers' was a definite benefit for of these approaches for many of the survey respondents too. Benefits were reportedly felt by staff in other ways, to do with their experience of teaching and this was reiterated by interviewee 1,

> *"It's nice for us [as staff] to be able to do something a different way, I mean 19 years and doing things the same way is quite dull but the move towards student-led approaches is good. I mean, we learn too, and we are always learning but after so many years in HE you forget that … it's a good approach to put students in charge, something different" [Interviewee 1].*

Staff experience of using new methods could, as noted by interviewee 1 be enhanced by new ways of working and new approaches.

When prompted about weaknesses of IBL and PBL the two interviewees reiterated key points they had made on the survey that students might not want to engage with and work through IBL or PBL and these could be methods where control was lost over the subject and focus could drift accidentally onto other areas.

> "*As I said before, you could end up with students just saying, 'no I'm not doing it', the whole fees thing, saying that they are paying to be here and not seeing the point, playing up and wanting easier methods that don't challenge them … we get that already to some extent, I mean they don't read for instance." [Interviewee 1]*

Fear of a negative student voice and their predilection for 'easier' methods that did not involve work or engagement were concerns for the interviewees, as they were for the surveyed staff. The opportunities that IBL and PBL brought were noted by both interviewees to be primarily about skills development (and outlined in similar terms to the 'strengths' of use). Threats in new pedagogy were spoken of in terms of trying to do something new within university constraints of rooms, time and curriculum.

> *"I don't think it's altogether easy to do something new at any University. I've seen this at other places than MMU. Innovation is seen as a pain, something that is nice to do but not really necessary within the functions of a university, which, let's face it is get them taught the easiest way with the least complaints and highest satisfaction ratings." [Interviewee 2]*

A point made by Interviewee 1, which was not mentioned in the survey comments, was about external examiners and attainment.

> *"Some of our external examiners might not get some of these new ideas. I mean some are very good but some wouldn't like the curriculum being lost … because they know that students need very directive teaching sometimes."*

And about the University structures being an obstacle and threat to innovation,

> "The University doesn't necessarily want innovation if it's going to disrupt things, the timetable, the students and what they want".

However, the interviewees did not see the problems as insurmountable and saw the solution within widespread training.

4. Summary

- 8 (40%) of respondents said they had experience of IBL and 5 ticked 'no' and 6 ticked 'not sure'
- Qualitative answers showed that they do not fully understand this term necessarily, even when the respondents were sure they did.
- 14 (70%) of respondents said that they had experience with IPL and knew what it was.
- However, again it was clear that many people used IBL and IPL interchangeably and did not understand the differences, even if they reported using IPL themselves.
- The negatives in using such pedagogies was the possible resistance from students and the danger of classes going "off track"
- The positives were the development of a critical thinking mind-set in students and the chance to staff to do something new within their own pedagogical learning.
- The SWOT analysis was not a very successful question and staff in general tended to focus upon strengths and weaknesses, repeating points made to the positives/negatives of using IBL and PBL methods question
- However, analysis of this data shows that there were 3 'audiences' identified that might prevent integration of IBL and PBL (act as obstacles) according to the respondents: a. students as 'consumers' of higher education, b. lecturers and the culture of teaching and learning they were used to and finally c. the institution itself.

Nicolaus Copernicus University - Torun

1. Background of the Participants

Our report and conclusions are based on qualitative Interviews which took place at the Nicolaus Copernicus University in Torun (march 2017) with 20 different University teachers in field of social sciences. The first conclusion is that they have various experience with inquiry-based and problem-based learning, as well as their general experience in university teaching vary.

There were 20 university teachers from NCU participating in this survey. 11 of them were women and 9 were men, so it makes our results quite equal according to gender issue. Concerning the age, the difference between the participants is more visible. Just 2 of them put themselves in the category of an age between 18 and 30, and only 3 participants in category 51 and above. Majority - 15 participants are in age between 31-50.

One question also wanted the answer on the position the participants holds at the university. According to answers, 15 people is employed as “adjunct / assistant professor”. One person gave the answer that he is working as a “PhD student” , 4 persons already entered the stage as a Professor. Moreover the subscribers were asked how long they have been working on this position? 7 people holds their position up to 5 years, 11 people from 6 to 10 years, and 2 persons over 10 years. They were also asked How long have they been working as a lecturer? Only 1 person works no longer than 5 years, 7 people works up to 10 years, and 12 subscribers have an experience in teaching over 10 years.

While summarizing basic information about our participants, one must say that they were mostly in their 31-50 age on a position of adjunct / assistant professor. Most of them hold their position from 4 to 10 years, however they are quite experience in working as a lecturer, as 13 of them works as a lecturer longer than 10 years.

In the next chapter I am going to give an overview over experiences with inquiry based and problem-based learning strategies.

2. Experiences of the participants with inquiry-based and problem-based learning strategies

The participants were asked whether they have had any experience with the IBL in real life teaching. The answers are equally divided. Half of the respondents have no experience with the IBL, but some individuals who claim that they have no experience, also note that they tries to encourage students to seek and expand their knowledge and experimenting independently. There are also few interesting comments, that sometimes new methods are just new by name, and their assumptions are similar to those already known and used.

The other half have experience in IBL, but rather to a limited extent. Just one person noticed that IBL is used permanently at her seminars and classes.

The next question was about having an experience in problem-based learning. In principle, all respondents have some experience in problem-based learning. But it took different forms. An example may be the development of group work, where students are asked not only to look for solutions to problems but also to formulate questions about the issues being investigated. Others noted problem-based discussions during conversation sessions or they specify diploma seminars where students work is based on the problem they have accepted for examination.

One participant argue that all her classes, including lectures, contain elements of problem-based learning. she points out, however, that it was preceded by lecturer methodological training "teaching by projects".

One respondent noted that problematic teaching was described in the 1980s in teaching textbooks, so it may already be used by some of the academics.

3. Demand of University Teachers on new Methods

To expand that issue, our participants were asked about their experience in teaching based on questions and problems? Our goal was to make a list of positive and negative remarks.

Most of the respondents indicated that they have positive experiences with inquiry-based and problem-based learning strategies which fulfilled their main assumptions. Main remarks concerns students and their way of participation at classes. One participant noted, that “if a student does something himself (he/she will understand it) it will be easier for him/her to memorize solution for longer”. In such an understanding problem-based learning also forces students to become more active. It also involves the need to solve problems in group, so it affects the ability of co-working. The other claims that it develop negotiations skills by allowing students to consider the issue from different perspectives. One participant noticed, that “the positive aspect is the visible progress of some students who are forced to address the problem and find their own solutions, which at the beginning of the

semester seems impossible to them". Moving to the lecturer sphere, some participants claims, that lecturers also feels more satisfaction while leading the teaching process based on questions and problems. There is also one common assumption - groups must be small. The smaller the groups are, the better IBL method works.

However, within this positive remarks few participants also noticed few tiny limitations, which shouldn't be counted as negative remarks yet. One claim, that "It is a popular form, but mainly for more talented and more ambitious students". The other noticed, that "such method works better in an international environment such as Erasmus + Students".

Moving forward, it should also be noted that the survey presents negative aspects which mostly concerns students lack of involvement in a teaching process. Our participant perceive, that "there is a group of students that are not prepared for this kind of teaching, because they do not understand its ideas, so they remain passive and / or reproductive". It is a part of more general observation, that some students show little initiative. They only do what they find in the command and in the least possible cost. One person notice, that even "they are willing to solve group problems, especially on the basis of rivalry and cooperation, but often the phenomenon of a stray passenger occurs". It also happens because students are reluctant to go beyond the curriculum and rarely read the recommended supplementary texts. One lecturer in our survey claims, that "thinking critical and even undermining assumptions are just a fraction of students. They often present critical attitudes, perhaps rebellious, but still based on stereotyped patterns of thinking. They lack the ability to leave the relativistic point".

To summarize this part, our survey proved that even lecturer have a positive experiences in teaching based on questions and problems, it is not always favoured by students as it requires systematic preparation for classes, requires more effort. One participant wrote, that at het observations "on average more than half of groups do not accept this mode of instruction at the beginning and attempt to deny it".

We also asked, whether it is intentional to implementing instructions based on questions and problems or other teaching techniques? In principle all the answers are YES. The main assumptions concerned the use of IBL are that it teaches creativity and makes classes more attractive, however it is more valuable to combine different teaching methods in order to achieve a synergy effect. One participant noted, that IBL "releases academic curiosity, denial of what is associated with dogmatism, passivity and didactic opportunism. In short, it is a kind of teaching without which it is difficult to imagine a modern university". We can also find in our survey, that IBL "follows a social change, on the one hand, and creates, stimulates such a change on the other. If contemporary students - as users of new media - have distracted attention, think "shallow" without understanding metaphors, allegories, irony, or allusion, it is one of the ways in which young people in culture and society function." So same

lecturers and academic environment as a whole needs to adapt to students evolution. IBL might be an answer to that need. But It is also noted, that new method raises requirements for students, but also for those who lead classes.

We also asked about examples of electronic tools that can be used to document and evaluate learning progress. Half of the respondents did not indicate any tool. The second half mentioned: MOODLE, Facebook, Twitter, Khan Academy, Quora, Google docs, Google Drive, Slideshare, YouTube, Camtasia, Internal University systems, blog, website, e-learning platforms, Microsoft Office software. It seems like 10 of 20 participants don't use such a tools, or what is more likely, they didn't realize they use it at the moment of filling our survey (but it is just a presumption which is not supported by our data)

Very interesting part of our survey was a question about description of strengths, weaknesses, opportunities and threats in the implementation of curriculum based on questions and problems at participants institute. Our participants noted, that main strengths are sstudents with a high intellectual potential, younger academic staff which is open to innovations in the teaching process, and same variety of offered classes which makes the teaching process more attractive. But also it is worth to add individual approach to the student, continuous professional development of university staff as educators. Also good specialists are available at the Faculty who are able to run problematic seminars (many of whom also have experience working in the public and private sectors). But most of all, Faculty studying programs include areas that can be run on a base of IBL method.

On the other hand some weaknesses are also spotted. At first it is routine and workload of lecturers, which reduce the potential of more engaging teaching. Than it is lack of appropriate technical background and creative spaces. Moreover, some professors, accustomed to old methods, used to the well-being resulting from their status, are reluctant to change - the resistance of part of the teaching staff to any change is a visible weakness. It would be aslo important to reformulate the curricula and adapt them to the specialization and competencies of the staff (some accidental courses can’t, however, be guided by IBL). And finally, the method requires the use of appropriate (scientific and professional) didactic tools to maintain and direct the interest of the students, which entails additional costs for the Faculty.

But on the same time, there are quite clear chances that might be used by implementing inquiry-based and problem-based learning strategies. Firstly, it improves students' creativity and flexibility to adapt them to changes in the labour market, and acquire important practical skills. Same time it selects the most talented group of students interested in self-development, which is also important while we consider the planned reduction in number of students that might allow more activities in smaller groups, in the seminar or workshop format. Using IBL establishes also a dialogue with the highest

ranked universities, where this teaching model is used same as supports trends in the activity of the university towards innovation and the use of modern didactic methods.

Moving to threats, our participants pointed few spheres. Quite problematic might be legislation and strong academic lobbying of those who are reluctant to change in the sphere of higher education,, where the lack of acceptance of new teaching methods and models is visible. But also lack of experience with a similar didactic approach among lecturers which combined with stiffness and excessive formalization of academic process might cause troubles for those willing to implement IBL. Also lack of tools to document and evaluate learning progress is mentioned. But it is necessary to notice, that not all students are adequately prepared to participate in such classes, so the instructor will have to put much effort into the preparation and implementation of new techniques. So the lecturer will have to put a high effort and secure resources required to prepare for change in teaching while the risk of lack of understanding of the appropriateness of such reform still might occur to him/her. We should also add the methodological discrepancy - if there were two different models of teaching in the universities/Faculty, traditional and based on IBL, which is a clear threat. And at the end of course student opposition to changes requiring a different approach to study (perhaps losing students through a program that will have an opinion "as a difficult one").

However, wanting to meet the identified weaknesses and threats, our surveyors also make a list of ideas how to overcome the problems and dangers of introducing new teaching system. In llegislation sphere it should be creation of the legal capacity to teach such methods. Also permanent attempts in changing the mind-set among older faculty's generation - training, incentives, etc. OF course ensuring the appropriate infrastructure base is crucial same as co-operation of persons conducting activities with new methods. Their students should be convinced that such classes are not just an ephemeris or didactic whim of one or two teachers but a carefully thought out strategy for the benefit of students. Moving to communication sphere, PR action to address the need for change and to promote the (new!) idea of the new teaching system is requires, both outwardly and inwardly the institution.

There is also an idea of rewarding the most committed educators and students in IBL by achieving measurable successes (average of grades, honours, projects submitted to competitions and awarding prizes, etc.). Of course it won't be possible without monitoring the progress of the reform, adjusting the pace and resources to monitoring results and without promoting of positive patterns, such as leading universities that teach according to the IBL rules, maybe inviting visiting professors from there. An interesting idea is to join IBL with a system of incentives - financial, but also in the form of certificates confirming additional qualifications of employees. Additionally, this issue should be included in the evaluation questionnaire of each item.

4. Summary

In this paper, we made a conclusion of the questionnaire, given to 20 different University teachers of different stand and position. To sum it up, 11 of participants were women and 9 were men, employed within the university mostly as adjunct/assistant professor and with an average 11.5 years of teaching experience. Concerning the question if they wish to have more support, the answer was a clear yes. Only half of them mentioned any platform that might intensify and simplify the teaching process of university students. Most of the participants wish to have more options to get different kind of support in improving their teaching methods.

The first and foremost, while analysing the open question answers, it is important to note, that the change with implementing the IBL should be systematic and holistically related to the particular problem areas. The new teaching system should not include changes mainly in the so-called “paper one", without a profound modification of didactic practice. Interest in new teaching solutions should be stimulated in order to improve the quality of education. Attention should also be paid to the professional development of teachers, including their theoretical and practical preparation for active learning within the IBL, but also to strengthen their skills and confidence in IBL assessment.

a. INTERVIEW 1 (dr Magdalena Mateja)

Our 1st interviewer is female in age 31-50, in a position of adjunct. She works on this position for 8 years, and been working as a lecturer for 12 years.

For question about having an experience in IBL, she answered, that “for this type of classes, I can probably include diploma seminars, which I have been leading for several years. As a result of the work on diploma seminars, the seminarians created original scientific papers , fragments of which are published in scientific journals or presented at national and foreign scientific conferences. One of the graduates has prepared an innovative journal article for the competition "Debut 2016", organized under the auspices of a Member of the European Parliament, Prof. Jerzy Buzek and several universities from the south of Poland.”

For question about students ability to use IBL method by themselves, she noticed that based on several years of observation she can assume that s operate on the basis.

She was also asked about having an experience in problem-based learning. She claimed that all her classes, including lectures, contains learning-based elements. Dr. Mateja adds, that she completed a methodical course "teaching by projects”, and this skills supports her ability to use problem-based learning.

For question about positives of using teaching based on questions and problems, she said that "some students become self-reliant, they take a challenge of the critical thinking. They are usually the brightest, and some young researchers and the best graduates recruit among them. I am satisfied with the didactic process based on questions and problems. Some of the research results and conclusions formulated in such classes I use in my academic publications".

But in the same time, dr. Mateja pointed negative experiences by using teaching based on questions and problems. She claims that "most of the students have not been prepared for this kind of teaching; they do not understand its main goals, remain passive or reconstructive. I blame the vision of both the higher education and education systems. Particularly education seems to be based on the nineteenth-century model of the Prussian school. The cultural and mental problems of Poles with innovation overlap with the patterns and lifestyles of the *C generation*."

She was also asked about her thought in concerning intentionality of implementation of instruction based on questions and problems or other teaching techniques. She said, that she supports by whole her heart and mind the idea and practice of teaching based on questions and problems. She supports the modernization of teaching techniques: "it is the duty of university educators to follow social change, on the one hand, and to create, stimulate change, on the other. If contemporary students - as users of new media - have distracted attention, think too superficially, without understanding metaphors, allegories, irony, or allusion, it is one of the ways in which young people in culture and society function. The lecturer should remain a guide to the world of knowledge, and a good guide knows the needs and character of the herd" she added.

She was also asked about an examples of electronic tools that can be used to document and evaluate learning progress. She mentioned some that work both on and off the campus: Moodle platform, Google tools, USOS system, blog, website, and even Facebook and Twitter ... "Most of them, including the most advanced, are available for free!" she noticed.

In describing strengths and opportunities in the implementation of a curriculum based on questions and problems at her institute, she pointed out, that the strengths and opportunities of teaching based on questions and problems are, above all, better attractiveness and effectiveness of such courses. Besides the continuous professional development of university staff as educators. According to dr. Mateja, another advantage is a selection of the most talented group of students interested in self-development, which may result in the development of academic staff in the future. "The introduction of this ambitious program is necessary, as without it there won't be the gradual acquisition of acceptance for this teaching in the didactic and student environment. Understanding the idea of the program goals will transfer - hopefully - into reach and effectiveness. Finally, the program leads to dialogue with the highest ranked universities in the world and in Europe, where this teaching model is used. I read about the way the Oxford professors conduct their classes that is, the university

is the place of intellectual activity for most of the day and every student develops the evaluation skills" she noticed.

Nevertheless, in describing weaknesses and threats in the implementation of a curriculum based on questions and problems at her institute, she noticed that lack of acceptance of methods and model of teaching is visible. She says, that "the introduction of the program involves a great deal of effort and resources, without which there will be no change in didactics. And what if these measures do not translate into expected effects? I note the serious risk of lack of understanding for the appropriateness of possible reform, academic teachers and students will be resistant. The resistance of the lecturers (mainly them!) Is related to the hierarchical, conservative nature of the academic community. When I started to work at the NCU, I've heard from one of my superiors: *The University is a long-term institution, everything slowly brakes down here.* Over the past decade, the reformers have fond of a few ministers of science, but the permanent effects of reforms are unlikely to be seen". Dr. Mateja also noticed , that students resistance may stem from a contradiction between two models: education that will not change as a result of our activities and higher education, one should change that education at this level contributes to innovation. The lack of agreement between secondary level teachers and academics will lead to methodological discord. In this way, the beginning of study will become such a sterile course, preparing to change the way of thinking about the teaching process. In this example, it's a waste of time. Her last concern was the presence in the universities of two different teaching models, traditional and based on questions and problems. At the end, she cannot exclude that some of the lecturers will not change their traditional attitudes.

In question about overcoming the problems and dangers of introducing a new teaching system, she answers, that It is necessary to launch PR action to promote the sense of the necessity of change and to promote the idea (or rather the need) of the new teaching system - this action must be directed both outwardly and inwardly. She claims that It is worth to reward the most committed educators and students who are leading in a modern way with measurable successes. Measurements could be the average of studies, awards for thesis, the number of projects submitted for contests and awards won, etc. It is also important to lead consistent methodology of action (!), strategy and implementation for longer periods. Without this, teaching based on questions and problems will go where the earlier higher education system reforms got stuck. "We must monitor the progress of the change, adapt the tempo and resources to the monitoring results" she says. International consultations and the promotion of positive patterns in a broad context will be crucial. Based on the experience of Polish education, both pupils and teachers, she seed the deep meaning of international cooperation within the EU. "I have some friends among the higher school teachers who are enthusiastic about the EU exchange programs as they benefited from them, as well as students who as pupils participated the exchange programs. They are more open to new teaching methods and models than others" she says.

b. INTERVIEW 2 (dr Joanna Piechowiak-Lamparska)

Our second interviewer is a woman in age 18-30 at the position of adjunct. She has been working on this position for 2 years, and has an experience as a lecturer for 6 years.

Dr. Piechowiak-Lamparska claims, that she has no experience in IBL, but she has some in problem-based learning. When she was asked to elaborate her answer by pointing some positive experiences by using this method, she said that ”I have no experience with IBL (I'm not sure if my students would like to learn in such a formula - it would require better preparation for classes), but problem-based learning is also not favored by students, as it requires more effort and self- using of sources/materials. Although I use such a formula in "International Security" and "Threat Forecasting", so it is simply boring (for the instructor and student) to deal directly with problem solving and to conduct them traditionally. The positive aspect is the visible progress of some students who are forced to solve the problem and find a solution at the beginning of the semester, which seems impossible to them at the beginning of the semester (selection of problem, choice of method, analysis of sources and formulation of conclusions). The negative part of the project is to get students to work, to get in touch with them and to convince them that I'm not joking and not get a traditional lecture. On average more than half of the group does not accept this mode of operation and tries to deny it.

When she was asked about positive or negative experiences in using teaching based on questions and problems, she answered, that “In general, I think that aside from subjects where some content you simply need to accept (basic subjects), the formula of the seminars conducted on the method of questions and problems is the most appropriate”. She would also like her studies to look like this. Dr. Piechowiak-Lamparska claims, that changing teaching methods is not only purposeful, but a necessity. The formula to hide-pass-forget is already insufficient. Teaching based on questions and problems is a chance for students to develop, but also to face various new problems. However, the method is therefore demanding for students and lecturers, but it can make a qualitative change for the better.

The only electronic tool that can be used to document and evaluate learning progress she mentioned Excel.

She also answered the question about SWOT analysis in the implementation of a curriculum based on questions and problems at her institute.. In describing strengths, she said that “first of all, there are very good specialists at the Faculty who are able to run problematic seminars (many of whom also have experience working in state and private affairs, especially in the field of international relations). Secondly the planned reduction in the number of students will allow for smaller classes,

seminars or workshops; then fields of study offered at the Faculty include areas where question-and-answer method can be implemented".

According to weaknesses, she says that it would be important to reformulate the curricula and adapt it to the specialization and competencies of the staff (random objects cannot be questionable and problematic). "It would be necessary to convince employees to change the way they conduct their classes" she claims.

By opportunities, she says that "It should be necessary to create a new study program. On the other hand the qualitative change of students (students looks for practical programs and problem-solving), but same time also development of lecturers".

When she was asked of threats, the main is the employee resistance to changes requiring involvement, but also students opposition to changes requiring a different approach to study. She is also worrying about the possibility of losing students because of a studying program that will gain an opinion as a difficult one.

To overcome problems and dangers of introducing a new teaching system the first and foremost for dr. Piechowiak-Lamparska, is importance for the change to be systemic and holistically related to the particular problem areas. Probably the initial protests of students and lecturers are also counted.

University of La Laguna - Spain

1. Background of the Participants

First of all, we are going to examine on the participants. All in all, the questionnaire has been filled out by 19 teachers from different universities. All of them were professors. Their fields of study, they are active in vary vastly. All of them are teaching in a field of social sciences, but belong to different fields of research. Moreover, they come from different universities, all over spain. As some examples, there are professors from the University of La Laguna, University of Las Palmas de Gran Canaria, the University of the Basque Country, University of Jaén, University of Granada, as well as the University of Santiago de Compostella.

Moreover, the professional forms differ. All of them can be considered as university teachers and more precisely as Professors. Within the term Professor, there can still be seen a variety of professions. Six are full professors, 10 can be considered as contract Professors/Assistant Professors, but there is also one associate Professor and one Collaborating Professor. Furthermore, within these 19 competitors, there are 10 male and 9 female teachers. 10 are between 31 and 51 years old and 9 are older than 51.

Their working time on universities is also different. The vast minority of teachers, to be concise, just three, worked for less than ten years at the university. There are four, having worked from 10 to 15 years, as well as four in the span between 16 and 20 years. The second highest figure, in this case 7 participants, worked more than 20 years in university teaching. The subscribers has also been asked on how long they worked as a professor. This differs from the latter question, because it is more specific. Three of them have worked less than 6 years as a Professor, three worked between 11 and 15 years, four between 16 and 20 and finally 9 of them worked for more than 20 years in their profession.

2. Experiences of the participants with Inquiry-Based and Problem-based learning strategies

Fifteen professors say they have experience in IBL, and four state they have no experience. Professors without experience point out that IBL is:

• A learning open to beliefs, issues, problems (2)

• A learning by exploration and expansion of knowledge (4)

• Self-directed learning (2)

• A learning subordinate to the methodology, the communication within the group and the choice of the subject of study (1)

• A learning independent of the program of the subject (1)

• A learning that a) has a specific methodology, b) starts off from a topic of study or problem chosen by the students in collaboration or not, with the teaching staff or with a working group, c) can be addressed in a group (1) .

Experienced professors emphasize that in IBL:

a) The research process is the basis of student learning:

- A methodology is followed to properly search for the information needed to understand and analyze the topic or topic under analysis.
- Learning is based on the acquisition of knowledge through inquiry and research processes.
- Student learning using methodologies that imply investigating a specific topic.
- Knowledge is produced through a research process.
- It involves a teaching-learning process of the methodology required for research.

b) Students produce their own knowledge

- The students deepen their knowledge in a subject through a process of search, extension and deepening.
- Students conduct research both to broaden their knowledge on a topic and to critically evaluate and analyze information.
- It is learning by exploration and expansion of knowledge.
- The student selects what information is related to the topic, and draws the conclusions or implications of the research.
- The students are self-taught.

In this regard, Professor A in the interview highlights the role of students in IBL:

> *In IBL, the students' initiative has more weight. It is the students who define the problem, even those who have to look for the procedures to solve it, always with the guidance of the teacher; the role of the student is more evident in IBL.*

This professor emphasizes the autonomy that is granted to the students in the process of IBL learning:

> *I believe that it intends to promote the autonomy of students as a more emphatic objective. In the case of PBL, autonomy is also developed, but in the case of IBL it is more noticeable or it underlines that objective more.*

The idea that the student builds their knowledge independently is shared by professor B in the second interview:

> *In the case of IBL, what is intended is that the student is able not only to find the necessary information, but also to know how to use it to build their own knowledge, and in that there is a degree of autonomy that may not appear in PBL.*

The topic or topic of research is chosen by the students. That is, the students propose the topics to be addressed through the IBL. According to Professor A:

> *That the students choose the problems does not mean that the IBL is totally disconnected from the curriculum, because the problems are part of an area of knowledge (...) In IBL, the relationship would not be so much with the curricular content, when the subject was selected by the students, but with the development of competences, of the competences of the corresponding degree.*

c) The student acquires or consolidates competences

- It is a process in which students can apply the competences they have acquired, as well as develop others.
- Through self-discovery, students acquire and develop research competence.

Professor A points out that the competences the students acquire or consolidate through IBL are:

> *The ability to develop research or more than research, to analyze a topic using procedures related to the inquiry, in relatively autonomous way. In addition, students develop informational, search, collection and analysis of information skills, and use that information to solve the problem with the topic they are dealing with.*

d) The professor has the role of guiding the students

- All through the guidance of a professor.
- The professor guides and advises the student.
- The student is the protagonist in the direct interaction with the subject or problem. of the investigation, with the teacher's guidance.

According to professor A, the professor should ensure that: 1) students cover the required learning competencies and 2) the topics of study are relevant to students' learning and to the field of knowledge:

> *As the students propose the problems, the role of the teacher should be to ensure that the required competences are covered, and emphasize that the problems addressed are relevant problems from the point of view of student learning, and from the point of view of the corresponding field of knowledge.*

e) The process can be developed individually or in groups

For professor A the processes of research-based learning must be performed from a collaborative perspective:

> *If you want to do both PBL and IBL, the work should be done as a team, it is not an individual learning approach, individuals have to contribute to the group, you have to make an effort to discuss, to reach agreements, to build the solution to the problems that put forward*.

PBL

Thirteen teachers say they have experience in PBL, and six say they have no experience. The teachers without experience point out that in PBL:

- Learning is through problem solving experience (6)
- Skills such as the ability to make judgments of value, communication, critical thinking and self-directed learning are developed (4)
- Problems are at the center of the learning process (1)

Experienced professors say that in PBL:

a) A problem arises and attempts are made to conceptualize, dimension it, to make proposals and activities for solving it:

- It consists of learning through problem solving.
- It is a learning that incorporates problem solving in teaching.
- It helps students to acquire the skills and results of learning from problem solving and not from theoretical lectures.
- It facilitates the learning of concepts through the resolution of problems adapted in pedagogical terms and in a sequential and progressive way.
- The specific reality is observed to work on it in a systematic and complex way to improve it.

b) A practical learning is developed:

- It is a system that puts practice before theoretical learning, memorizing concepts.
- It is done from an educational innovation project, where the students must acquire all the practical contents from solving a problem such as, for example, geo-tourism in geo-parks: they must know how to classify and do an inventory of resources and tourist areas and calculate their tourist potential, etc.

Professor A emphasizes the eminent practical nature of PBL, and underlines the need for the student to master conceptual elements for solving problems:

It is not just a matter of solving a problem mechanically or giving a diagnosis. Good problem-based learning practices blend theory and practice, that is, problem solving work must integrate conceptual elements and know how to handle the conceptual elements necessary to deal with the problem.

c) Problems set by the teachers are analyzed in detail:

- PBL methodology is a collection of problems carefully constructed by groups of professors from related subjects.

In the opinion of professor A*: In order to develop a good approach to learning based on problems, good problems have to be designed, so that they promote student learning.*

d) It is developed through a collaborative process:

- Essentially, the problems are presented to small groups of students helped by a tutor.

e) It favours the learning of skills:

- Relational ability, critical analysis or applicability of knowledge is developed.
- A method for developing value judgments and critical thinking is developed.

Some of the respondents point out that PBL is a type of research-based learning, only addressing relatively specific problems, usually in the case format, raised by the professor to a group of students. Professor A states that:

> *They are similar, what happens is that problem-based learning is a more teacher-led approach, insofar as it is based on teacher offering relatively open cases or problems in a field of knowledge, generally practical, and students form groups and then the professor helps them in the problem solving process.*

Professor A and Professor B stress the higher level of demand of IBL for teachers and students. Professor A says:

> *IBL is an even more demanding model than PBL in terms of the skills that the teacher must have to develop it properly and the degree of involvement, maturity, and initiative that the students should have. From my perspective, IBL is more demanding in several aspects.*

> *Yes, it requires a lot more work than a traditional methodology of ... I get to class, I say this and you repeat it in the exam. It is necessary, apart from studying a lot and investigating a lot, an experience that I have been getting over the years*.

Professor B says that IBL is a more open and less defined process than PBL, as it is the students who build their own knowledge:

> *The problems in PBL already have a series of methodologies established for their resolution; However, in IBL there is no established methodology to carry out the process of construction of the knowledge itself; it is the student who uses the skills he or she has to move towards a new stage of knowledge, that is the difference for me*.

In summary, the responses of the subjects show clear differences between the two processes: 1) PBL is a process: a) that is more directed by the teacher, b) where the students have less autonomy, c) that

is more oriented to obtaining knowledge through the resolution of practical problems, d) where problem-solving schemes are used. 2) IBL is a process: a) that requires more initiative from students, b) that is aimed at students building their own knowledge, c) where the student builds knowledge through the research process that they themselves plan and carry out.

The subjects coincide in pointing out that both processes can be of an individual or group character, although they emphasize the importance of collaboration in the resolution of practical problems as well as in the construction of knowledge. The subjects also agree that the two processes make it easier for students to: 1) acquire and consolidate their research skills, 2) perform critical analysis, and 3) stimulate their ability to apply knowledge.

The professors define the following as positive and negative experiences of the IBL:

Positive Experiences	**Negative Experiences**
• Students are able to approach the investigation of a problem with the procedural orientations given by the professor. • Students get better learning outcomes and acquire skills better • Students are more involved and interested in research • Greater capacity for group organization (discussion and division of tasks) • The process (with more time) fosters critical capacity and reflection • The satisfaction of students in carrying out a work that reflects their learning through research • The process increases motivation and favours independent work and student maturity • The personal satisfaction of getting students to understand and value the	• Many works do not meet professors' expectations • It is difficult for students to define the research problem and to specify a research procedure appropriate to the problem • Academic calendar does not allow continued field trips • Students have problems in developing research processes with academic discipline (they do not know how to look for information, write a theoretical framework, analyze data, describe and select relevant results, draw conclusions, transfer them to the social context or see their practical implications) • Lack of time or difficulty in teaching students the methodology to be used

research process, learning through this process • Review of results with the groups under study	• Demotivated students do not value IBL, and see the process as a way of passing the subjects • Rejection of students due to the uncertainty and time required for traditional teaching • Very high level of requirements for the students of the degree

In relation to negative experiences, Professor B points out:

> *The culture of learning that we have in this country does not promote that learning must go towards the construction of knowledge, on the contrary, it is a culture based on the reproduction of knowledge (...); When you are talking about a certain subject and you ask the students to express their experiences in relation to that subject, they feel very good. When you try to abstract some of the experience towards 'what are the reasons why this particular case happens?' It is hard for them, they have not learned to abstract, so when you ask them that, they start to feel insecure*.

Professor A points out that it is difficult to develop IBL in a context where an expository approach to teaching predominates:

> *We are more accustomed to an expositive approach to teaching, that approach still predominates, I have the impression that when we propose group work we do not have the skills for the process to be developed is a research process, what usually happens is that we guide the pupils too much or we leave them to their free will and they do not know how to face a more open approach to learning.*

The professors mention the following as positive and negative experiences of PBL:

Positive Experiences	**Negative Experiences**
• It forces me to define problems within a knowledge area and to learn to guide students in the process of inquiry	• The institutional dynamics do not allow us to deal with this type of methodology with guarantees

• The work of the student groups can be tracked • Student groups produce very good products as a result of their work process • Greater involvement/interest and capacity for group organization • For students it is the best way to learn • It awakens thinking and healthy competition • It teaches how to think • It allows collaboration in the transformation of peripheral realities • It improves the teaching	• Problems proposed to students sometimes do not have the same degree of specificity or difficulty • Inability to adequately advise all students in the work process • Students have problems in reading comprehension in the identification of problems • Lack of perseverance in multidisciplinary teams • Difficulty developing the programming required by the PBL • PBL imposes a change in the way in which teaching is understood and planned. This entails an effort of teacher training that is not being given

3. Demand of University Teachers on New Methods

Thirteen professors said they wanted to receive training in IBL, compared to six who answered negatively. Professors want to receive training on: a) How to accompany students in the process of defining the research problem by promoting their autonomy, 2) How to guide the students to carry out a research procedure appropriate to the problem defined, 3) Qualitative research methods and techniques, 3) How to guide the students about the research methodology applied specifically to the area of knowledge, 4) Methodology and resources used in IBL, 5) the evaluation of the progress of learning/competencies in IBL, 6) European and Latin American experiences in IBL, 7) how to relate the IBL to the acquisition of competences in specific subjects, 8) strategies to incorporate IBL in university education. Six professors point out that they would like to receive this training in a semi-contact way (a virtual part and a face-to-face part through seminars), 4 prefer only on-line and only on-site training.

Eleven professors said they wanted to receive training in PBL, compared to eight who answered negatively. Professors want to receive training in: a) Learning to build sufficiently open problems to play a significant research process, 2) learning to build problems of a similar level of difficulty for the

same group, 3) learning strategies for adequately advising students in the work process, 4) methodology and resources to implement PBL, 5) how to incorporate PBL into university education, 6) what is and how PBL works, 7) methodological variants of PBL 4x4: 4x4 PBL, 8) the role of the tutor in PBL, 8) the assessment of competencies PBL, 9) tools for analysis of complex problems, 10) improvement of the processes of evaluation of PBL, 11) How to motivate the students, promote autonomous work ability and a sense of responsibility towards oneself or towards the group. Four teachers point out that they would like to receive this training in a semi-contact way (a virtual part and one face-to-face through seminars), three prefer only on-line and only face-to-face (workshops, courses, talks) training.

Electronic tools that can be used to document and evaluate progress in learning

Fifteen professors say they are not aware of electronic tools to evaluate the progress of student learning. Four professors name tools such as: a) questionnaires in Moodle, b) Google questionnaires, c) documents shared in Google Doc, d) interactive lessons, e) mindmanager, f) infographics, g) online videos, g) digital portfolio , h) webquest,

The new teaching-learning methods in your institution (Strengths and Weaknesses)

Four professors do not answer and two wonder what these new methods are. Professor A stated in the interview that the new teaching-learning methods used in the university are not so new, but are an implementation of procedures already used at lower levels of the educational system:

> *What has happened in recent years in higher education is that methods that have been used at lower levels are being used or are now trying to be used in the university. Project learning, in which the students decide on the subject and get involved in a research process, all that has to do with trying to make the students play a more active role in their learning is now trying to be implanted in the university. Then, there are a series of methods such as learning-services, the use of ICT in a different way than they were used until recently, the "flipper classroom" as a strategy in which we try to involve students and propose tasks in contact classes that involve cooperative work, collaboration that is another element of new technologies. All these approaches were already applied in non-university education, and have been translated to university education.*

Professor B adds that the new methodologies, apart from not being so novel, consist of incorporating ICT underestimating other didactic options:

> *For me they are not so new, all they do is incorporate ICT, a lecture is continuously being underestimated because what an expository class is has been confused with a lecture. The famous new methodologies do not point to the idea that the student has to build their own knowledge, but abound in the idea of putting new tools; but in the end the goal is not for the student to build a new knowledge, but for the student to continue reproducing the received knowledge, for me that is an old model. A new methodology would be one that really pushes the capacities that all the students have to reconstruct the knowledge that we present to them and to elaborate their own knowledge, that does seem innovative to me.*

The strengths and weaknesses mentioned by 13 professors regarding the new teaching-learning methods in the university are:

Strengths	**Weaknesses**	**Opportunities**	**Threats**
1) Development of new teaching-learning methods in educational innovation projects 2) Implementation of new teaching-learning methods individually or in the context of a subject 3) It improves the learning process, oriented mainly to practice 4) It is bet more for the form than for the content of the learning	1) The working conditions of teachers make it difficult to implement new methods 2) There is a lack of shared planning and reflection on teaching practice 3) Lack of human resources; You need to increase teaching staff 4) It is sometimes limited to the use of ICT, but it does not change the role of students or the social role of learning	1) Professors willing to use new teaching-learning methods 2) New training opportunities for professors in new methods 3) The revision of the degree titles allows the incorporation of new methods 4) Improvement of teaching and	1) The working conditions of teachers 2) Evaluation pressure on teachers and universities, focusing more on the research side than on the teacher 3) The new methodologies are not transversal, at best they are used in some subjects

5) It is taught to continue learning and questioning 6) Increased teacher motivation	5) Little experimentation in the institution, lots of expositive teaching 6) Poor teacher training and collaboration in the implementation of new methodologies 7) Deficient training of students who enter university, work ethic	innovation capacity	4) New methodologies are not valued by co-workers 5) Lack of time for implementation

Professor A expresses doubts in the interview as to whether the new teaching-learning methods cover all the skills that the students need to develop:

> *The question that I ask myself is, with these methodologies can we cover all the competences that the students are supposed to master?, I am not sure, there may be some skills that require more traditional approaches; However, I believe that the new methodologies are very valuable and should be used more frequently.*

Professor A points out some obstacles to the development of new methodologies in the university:

> *I believe that the weaknesses are not in the methodologies themselves, but in the people who have to work with them, and in the contexts in which they are developed. Professors are more accustomed to working in other types of methodologies, and we resist for various reasons using this type of methods (...) If they are developed rigorously they also require more effort from students than traditional ones. Professors and the greater pressure that is being exerted now on investigation means that people are more occupied by investigation than by teaching.*

To overcome these weaknesses and threats the professors propose the following:

a) Change the institutional culture to promote good practices.

b) Have more resources.

c) Elaborate integral proposals by centers or faculties that involve several departments.

d) Encouraging training and recognizing a specific remuneration for improvement and updating of teaching, including it in DOCENTIA as a key aspect of the improvement of teaching quality.

e) Make the timetables flexible adapt the types of tasks and activities to reduce the extra load on the teachers

f) Work with patience and dedication.

g) Not to lose sight of the final goal which is knowledge.

h) Fewer platitudes on the use of the tools and a more rigorous evaluation on the results of the learning.

University Alexandru Ioan Cuza of Romania

UNIVERSITATEA
„ALEXANDRU IOAN CUZA“
din IAŞI

1. Background of the Participants

We sent the questionnaire to a number of 27 university teachers and we received – until 5th of April, only 18 filled out questionnaires. We had taken 2 interviews – with two of our colleagues.

So, we will take into account the answers from 20 respondents

The majority of the respondents are between 31-50 years old (only two respondents are professors being 52 and 54 years old and almost 25 years working in our university, being titular of two or more disciplines) and they are now on their professional mature age, meaning that they are Lecturers, Assistant Professors or Associate Professors working in higher education for 12-15 or 17 years. All of them are teaching Courses and Seminars on the Social Sciences Domain. About the gender distribution, there are 15 female and 5 male respondents.

2. Experiences of the participants with the concepts and strategies of Inquiry-based and Problem-based learning

In synthesis, all the respondents are familiar with the inquiry-based learning strategy. Some of them even tried to present definitions or personal descriptive approaches. For example, one of our colleagues presents the Inquiry Based Learning as follows: “The process of teaching and learning in which we are using the method of discovery so it is an useful technique as it offers proper context to develop the capacity of inquiry and research of the students spirit as well as it induces the stimulation of curiosity in relation with the new and with the acceptance of the diversity in the field of knowledge.”

In their opinion, this learning strategy activates autonomy into the individual learning process (assimilation of knowledge) as well as it allows the application of interdisciplinary and

integrated approaches. The technique implies to go through a study material/text step by step. Therefore, it entails an evaluative approach that values the valences of the bibliographical references. Besides that, the lecturer has the possibility to choose between different forms of organisation: groups, individual or frontal. The method stimulates Creativity and Critical thinking based on an interactive strategies set. The teachers involved in our Needs Analysis, understood the Problem-based learning as an approach in which the problem needs to be reformulated by the students and pretends focus on personal investigations, personal readings becoming useful during the group debates. An important aspect of the IBL is the moment in which the teacher has to present a text, because it has to determine a debate or even a dilemma in the students mind. The proposed cognitive conflict needs to be ordinary, not special for them. Therefore, they learn to deal with problems and situations in which they face difficulties, as well as they learn to deal with different ways and methods to solve them. In the same time, during the conceptual delimitation, the teacher is an important person for creating a common perspective. On the other hand, the teachers have to have a neutral position during the students' debates. Just within the Reflection part of the class he/she can construct a main conclusion for all the participants.

Usually, in social sciences, the Problem Situation which is the starting point in the learning process has, in our colleagues perspectives, an important characteristic: lack of determinative resources elements or options; lack of information for a good and complete description. For a student it is difficult to see the complexity of a social fact, event or process, so it is important to use specific learning strategies which helps them considering the Complexity like a Social knowledge characteristic itself.

We can make a short conclusion for now: There ***are not deficits in understanding the concept***. There are precise definitions or some descriptive approaches, but they are logic and correct.
Almost all the respondents have good /positive experiences in utilisation of Inquiry Based Learning mainly because the students often declared they had a positive cognitive experience during these type of activities and a lot of satisfaction on the end of those classes.
"I have great experiences related with IBL or PBL because the teacher's satisfaction is huge when we can provoke an assumed learning process in our students. And learning using discovery and problem solving are this type of learning"

In the respondents' opinion, these methods involved not only cognitive student's evolution but there are related with motivation and affectivity areas. "Our students became much more motivated to learn, because they like to be learning agents, in the end they feel Self-directed persons on their learning process and they understand that they win, they became more capable persons…"
A lot of our respondents said that these kinds of classes for being successful are depending not only on the teacher's contributions but on student's good preparation and their wish to be active. "It is not easy!"

"As a professor, I often propose these methods to be used in the process of teaching and learning, projecting various and multiple contexts in order to determine a participatory behaviour. I am interested in creating experiential teaching and learning contexts within which the process of identifying the problems and finding alternative answers represents knowledge sources."
Without a good knowledge or even, a profound perspective about the content of the proposed learning process, it is possible to develop a wrong approach for these reflective strategies.

Some of the respondents are presented ***some negative experiences*** related with the utilisation of this kind of teaching and learning, too, so, we tried to see WHY could be a negative experience for them: A Debate is seen like a learning technique or a learning process. Good scientific or cognitive and good communicative skills, are developed too. Sometimes, our students don't have these, so the teachers have to be involved in other specific roles during a learning session. This implies that these teachers need to be more than coordinators sometimes.

In Romanian Higher Education, the lack of "debate culture" it is another obstacle in using these kind of learning activities.

The process of teaching and learning, using the method of discovery is an useful technique as it offers proper context to develop the capacity of inquiry and research of the students spirit as well as it induces the stimulation of curiosity in relation with the new and with the acceptance of the diversity, the complexity of phenomena in this field of knowledge. These strategies activate an autonomy technique of learning (assimilation of knowledge) as well as

it allows the application of interdisciplinary and integrated approaches. The technique implies going through a study material step by step; therefore it entails an evaluative approach that values the valences of the bibliographical references. Besides that the professor/the trainer has the possibility to choose between different forms of organisation: groups, individual or frontal. The involved methods stimulate the creativity and the critical thinking based on the interactive strategies.

Some of the respondents told us that these IBL-strategies imply the establishment of a demarche of teaching-learning process that values the cognitive-constructivist strategies and enables analysis behaviour of alternative situation and to choose the optimal one. The PBL-strategies develop the ability to observe problems in different areas of knowledge and the ability to identify appropriate approaches of problem solving. It values the divergent or convergent thinking assuming the achievement of real transfers from formal towards non-formal and informal contexts. These learning strategies determine the pragmatism and capitalize the process of identifying the existential problems, whose solution facilitates the development of the creativity. It can be considered a new type/technique of teaching-and learning process

Related with **the need of support**, only one professor told us that he doesn't need any support, but all other presents the idea that they need support, especially on practical perspective: workshops, short time trainings, sharing best practices and good or not so good experiences (into the same speciality or in complementary courses);

For all the teachers involved in our Need analysis will be a great help if they can receive access to a data base of best practices, with concrete examples of Problem Solving Inventory for Social Sciences Topics. "A guide with examples of applications of IBL and PBL in or for Social Sciences Domain like a Good practice Guide... and with some useful links, too." "Any examples for the Higher Education it is useful, even with video practices, interviews..!"

"A big Yes, by suggesting contexts for accessing of formatting curriculum for academic environment. I think it is necessary the implication in the formatting courses realised/developed face to face as well as using interactive platforms (on which could be identified good practice examples from different school systems)."

Almost all the respondents are not familiar with some electronic devices or programmes which can help for registering and assessment of the progress of their students learning. A few of them used and are using online platforms: moodle or the Blackboard Platform of our university – www.mediaec.

Briefly, a SWOT analysis in synthesis could be:

Strengths: diversification of the curricula content for forming the students; developing creative behavior; the possibility of achieving programs and educational projects which implies the transfer of cognitive knowledge, development of important skills.

Weaknesses: the existence of an over specialization limits the creation of inter-disciplinary teams that determine the development of efficient teaching learning methods ; it focuses on the teaching aspects and less on the aspects of how the assimilation of information is achieved (learning styles, contexts of learning, effective learning strategies)

Opportunities: Creation and development of interactive platform designed for e-learning using the discovery/research method and the questioning/enquiring and problem solving method; identifying and developing partnerships with different faculties and stakeholders, in order to develop experimental learning contexts and to implement long term projects; the possibility of developing educational policies in order to support the development of a curriculum focused on forming skills and competences.

Threats: Possible malfunctions at the administrative level; lack or low number of IT specialists who could ensure the sustainability for implementation of long-term projects; different aspects related to financial sustainability.

One of our **strong points** revealed by all the respondents are: we have a young and open mind Department of Teacher Training, they are very active on the university academic life, are developing a positive perspective about learning and teaching; which can be involved in such experiments during their teaching time. There is a strong interest for academic performs, for applying new learning strategies on experiential perspective, too. The main risk for implemented such ideas is the time of experimentation phase – "sometimes the implementation of a new methodology can become a struggle for the comfort or routine of some teachers." So, it is important to have a coherent and strategic plan for motivating the teachers and the students to be part of this project, mainly because we are a Bologna

University – short time for professionalization. All the respondents considered that **the threats could be overleaped,** even we have to propose an in-service teaching program for the young university lecturers and associate professors.

Creating inter-disciplinary teams in order to develop new educational practices that start from the research data. Developing an appropriate and adequate infrastructure designed for activities that involve the teaching and learning, while using the method of discovery/research/problem solving/experiential learning. Formatting Curriculum adapted to the needs of the professor from academic environment. Developing the researches that values the existing practises of all European and international levels in terms of computerization. Achieving a good management at institutional level (regarding the curriculum, human resources management, research management)

3. Summary

This report is illustrating somehow the sum of the ideas of the Romanian lecturers about Inquiry Based Learning. Even, the main part of the participants were female, employed within Alexandru Ioan Cuza University, we can extend the results, none of the items included gender specific bias. Our teachers know a lot about Inquiry Based Learning but mainly from the theoretical perspective. If they had some experiences in using a specific methodology they would need support in motivating students to use their Critical Thinking abilities, in understanding a specific area scientific text or in using reflective reading and personal writing techniques. Concerning to the question about a needed support in using E-learning on their practicum, the answer was mainly Yes. They sustained the idea that they used moodle platforms and, especially, our university Blended Learning Platform www.mediac , but all of the respondents are still interested in all kinds of E-learning support, to get to know Good Practices from all over the world, being in touch or networking with their colleagues from Europe or other continents. The main concern about the development of the IBL or PBL in our university was related with having more opportunities within the university (even, under a Strategic university research theme) and they also wish to get more support from the different levels of our administrative departments.