Judit MIHALIK

Agile Approach in Higher Education

A collaborative research project report

Initiatives

This study covers a report of a learning project, which intended multiple achievements. The project, as an intrinsic part of a regular course,[1] broadened the core knowledge of students within the field of Human Resource Management via active learning methods, while harnessed and developed future-oriented digital skills and competencies for academic and professional purpose.

In Spring Semester, 2019, at Milton Friedman University, Budapest, I held a course titled „New Trends in Human Resource Management". The lectures focused the current technics and concepts influencing the theory and the practice of HRM, such as AI-driven recruiting, new ways in compensation systems and headhunting, searching passive candidates for particular positions via analyzing their social media digital footprints, gamification in onboarding processes and in benchmarking, or even in assessment procedures.

The idea of the collaborative research project itself came from a spontaneous classroom debate, related to their expectations and worries regarding their professional carrier. As students were stakeholders of the question, they were all enthusiastic toward the topic, so they involved quickly in the proposed project idea. Following the suggested initiatives, the study group decided to design and implement a European scope survey on the Millennial's expectations toward the future of work.

The agile approach as a framework

Whereas the idea of the research project came up spontaneously, first of all, I needed to find a flexible, resilient, adaptive framework. This is the agile model, which is well known in the ICT sector as a project management method. The fundamental document of the original agile model is Manifesto for Agile Software Development.[2] However, in the last few years, agile principles have been widespread in different domains, particularly in leadership, management, organization development and education as well. „The most important principle in agile is to take continuous feedback, learn from the previous iterations and try and improve in the next iteration. There is no concept of best practices. Better and better practices will keep on evolving as practitioners master their environment. Agile approach means taking a risk. In the process, one may make mistakes, but the important thing is to detect the mistakes early and fix them as soon as possible" (Kamat, 2012:231).

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[1] The course included thirteen 90 minutes-long classroom lectures. Course participants were 22 international BA students studying in Hungary with the Erasmus Program, mostly Management Studies and Finance specialized, originated eight countries: Greece, France, Germany, Luxembourg, Serbia, Spain, Switzerland and Turkey. Since the course has no strict and fixed curriculum (as HRM trends change quickly), it seemed to be fruitful to have a broader look beyond the topic. More precisely, as the design of the course inspired by an interactive, experience-based learning concept (testing the latest technics, tools and solutions: e.g. benchmarking games, provided by a guest speaker), it also offered a great chance to learn the attitudes and biases toward the AI and data analytics-driven solutions, user awareness, personal data protection among the course participants. Whereas students were Millennials, or so-called the "digital natives", who often shows "participatory exhibitionism" (Sherazio, 2015) it was not a surprise that their concerns toward personal data analysis based HR trends were quite open and fearless.

[2] See here: http://agilemanifesto.org/ Last download 12.08.2019.

The agile principles incorporated into learning context are stated in manifestos too, for example in Peha's (2011) version: "We are uncovering better ways of educating children by doing it and helping others do it. Through this work, we have come to value: individuals and interactions over processes and tools; meaningful learning over the measurement of learning; stakeholder collaboration over constant negotiation; responding to change over following a plan" (Peha, 2011:23)

The agile approach seemed perfectly suitable for skill developments in the given educational settings too (see Bruegge, Reich & Schiller, 2009), since there are no strict rules but it provides useful pragmatic principles. "Agile model is not a methodology; it is a way of behaving; it is a culture; it is a mindset" as one of the agile practitioner professional[3] paraphrased in his blog. The agile approach focuses on results, as well on participant's needs and flexible enough during the whole learning and collaboration process. The 'learning by doing' method was an appropriate way to avoid the loss of time[4] gaining full participation and presence.

Developing skills in higher education as a challenge

In higher education, in a university environment, combining traditional education with future-proof skills development has outstanding importance, but it is a great challenge, indeed.

According to the document The Future of Jobs Report, 2018, World Economic Forum, the most required skills in five years are the followings: 1. analytical thinking and innovation, 2. active learning and learning strategies and 3. creativity, originality and initiative (WEF, 2018). These skills are human features that may not be easily replaceable by augmented machines and algorithmic labor in the near future.

The report states that, in five years term, more than half of employees will face the reskilling or upskilling imperative. So, active learning and learning strategy, as a silver medal skill, is not an empty slogan. It is second in line but probably the number one in its complexity since it affects all other elements of the required skills. In the preface, the report emphasizes the responsibility of educators too, stating that "Workforce transformations are no longer an aspect of the distant future. As shown in the five-year outlook of this report, these transformations are a feature of today's workplaces and people's current livelihoods and are set to continue in the near term." (WEF Report, 2018: 18)

Moreover, looking at the expectations of the future workforce, 84% of the companies plan to hire new permanent staff with relevant skills to new technologies. It also opens the door for newcomers, which means, for youngsters, developing proper digital skills combined with those demands mentioned above, is imperative. As a consequence, "policy-makers, regulators and educators will need to play a fundamental role in helping those who are displaced repurpose their skills" (WEF Report, 2018: ix).

Similar forecasts on the future of work and lists of requirements of the prospective human workforce are widely studied by "the big four" companies, consultants[5], academics and professionals. Countless white papers and proposals published, and many are on the way[6].

Apparently, current educational initiatives increasingly aim to meet these demands, for instance, using crowdsourcing in education (Benedek, Molnár & Szűts, 2015), or even open the door into an entirely new world of teaching approaches in developing visual culture (Szűts, 2012).

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[3] See this website: http://agilemethodology.org/want-to-be-agile-stop-doing-projects/ Last download 12.08.2019.

[4] A non-academic survey found that university students have an average attention span of just about 10 minutes. "Students only have 10-minute attention span." Retrieved from http://news.bbc.co.uk/2/hi/uk_news/education/8449307.stm Last download 12.08.2019. Last download 12.08.2019.

[5]Example https://www.bain.com/insights/labor-2030-the-collision-of-demographics-automation-and-inequality/ Last download 12.08.2019.

[6] See examples here: Balliester and Elsheikhi (2018)

Methods and practices by phases

For the purpose of implementing these principles in practice, in this project I applied (or, you could say: "this project applied") a mixture of facilitation tools, online and offline collaboration tasks and individual workloads in order to develop a variety of skills and competences.

Within the course, the research project itself included seven short phases (or, using the agile term: "sprints"), each having distinct objectives and applied methods: 1. icebreaking 2. survey project shaping 3. survey processing 4. data collecting 5. discussion of findings 6. individual papers submitting 7. publishing. Following the agile approach, all the phases ended with a brief evaluation (short online or real-time feedback) for a public understanding of the obtained results and objectives.

Seemingly, the first five phases were cooperating issues, while the last two were individual tasks. These phases followed the approach of the project design, helping students to get into the research methods and practice gradually, with more supervision at the beginning, inculcating participants step by step into a self-reliance work.

Below, the project phases are explained in detail.

Project phase 1. Icebreaking

As a start, students could test their team problem-solving skills via "Line Up" experience. It is a training tool, widely used in business training as an icebreaker[7]. In this situation, the teacher took the facilitator's role, whose main task was "to help the team or group increase its effectiveness by improving its processes" (Thayer-Hart, 2007:17). The phase turned a group of classmates into an engaged cooperative team, meanwhile raising the opinion drivers in the team as well as appearing the potential leaders and the most creative one. As a bonus, the facilitator could also capture a brunch of useful information on the dynamics, strengths and weaknesses of the team for the forthcoming phases.

Project phase 2. Survey project shaping

Following the icebreaking, another facilitating tool was applied for the survey project shaping. OPERA[8] is an ideation and decision-making tool. It covers a five-step process: 1. own ideas, suggestions bringing 2. pair suggestions: discuss them in two 3. explain the chosen ones to the team 4. rank the proposals came up within the team 5. arrange them all. During this phase, the project team worked out the main shape of the research and proposed a draft list of questions for the survey. Bringing up individual initiatives, the core interest became visible making clear the research focus as well. During the cooperation, the common interest issues were summed up, putting plans in place for future incorporation. As a result of this phase, a shortlist of questions was raised.

Project phase 3. Survey processing

In preparation for the next phase, participants created a homework assignment suggesting answer options for the previously selected questions. For project tracking, Google Classroom was used since some of the students had to leave for shorter or longer periods (family matters or exams at the resident

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[7] "Line Up" short description: as a start, each participant gets a 3-digit number written on a piece of paper. They need to learn it to remember, but not allowing showing it or telling it to their peer. Then the group has 30 minutes to discuss a strategy. The goal is to form a line by ascending order of the given specific numbers, with covered eyes, neither verbal communication at all. Making noise and touch each other is allowed. See
e.g.: https://www.sessionlab.com/blog/icebreaker-games/ Last download 12.08.2019.
[8] OPERA is a holistic participative process, developed by Swedish consultants at Innotiimi. "OPERA is advanced as a process that challenges hierarchical dominance in meetings. Originally used for group problem solving, applications of the process are now applied in teaching, learning and planning contexts. Underpinning the process is a desire to counter the negative effects of extroversion. An individual's fear of group critique is managed through the process of engagement. Participants start by considering their ideas on a topic before pairing for further discussion." (Slaen et al. 2014, p.22)

university). The online collaboration helped to keep the project ongoing regardless of the circumstances. The suggested answers were selected by a similar method of the OPERA, using online tools, such as Mentimeter. The final form of the survey was created by a volunteer student (for bonus points), using Google Forms.

Project phase 4. Data collecting

For data collecting, thirty Erasmus Program countries were shared by 22 student-researcher participants, to collect responses from each one. As a result, 281 respondents filled out the survey in a two-week period.[9]

Project phase 5. Discussing findings

Data collection was followed by a classroom discussion. During a brainstorming session, study options were shaped by participants as an individual initiative. Some students decided to analyze the data by gender, by country or by region, while others made a comparative study selecting a specific point if interest or proposed a summary of the entire project. Writing in English was not mandatory; however, most students decided to do so.

Project phase 6. Papers submitting

Finally, papers were submitted in as many as six languages. For the project leader, supervising the content development and proofreading was achievable by online translator applications.

Project phase 7. Publishing

The last part of the project was publishing papers. Students were encouraged to find publishing opportunities, such as university journals, company websites, consultancy firm's portals, or even their own private blogs. 20 of 22 participants submitted his/her research paper.

Table 1. summarizes the project phases, explaining the objectives, skills and competencies used and intended to improve.

Phase	Character	Skills and competences to use	Skills and competences to develop	Core objectives
Line Up	team storming and forming	creativity, originality, innovation	cooperation, assertive communication, problem-solving	icebreaking, engaging, discovering strengths and weaknesses
OPERA	cooperative ideation and decision making process	micro researching, basic information gathering	teamwork, peer work, individual work, rhetorical skills, compromising	design a survey framework in a trustful, safe cooperation environment

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[9] Obviously, this research was not a representative survey regarding the statistical sampling, nor did it meet the rigorous academic standards. However, aiming for the first-hand experience of the research process and paper submission in a limited time, was not the focus of its objectives. The raw data are available as open-source material, for further studies and here: https://www.researchgate.net/publication/335263882_Millennials_Survey_data_2019 Last download 12.08.2019.

Survey processing	developing survey: questions and answers	researching, shifting ideas	academic standards incorporating	finalizing survey questionnaire
Data collection	find volunteer respondents	social media use, networking	initiative, complex problem solving	cover all the 30 countries, follow up the link
Classroom discussion	public debate	critical thinking, rhetoric	analysis	framing the study, preparing for submit
Papers submitting	academic writing	data conversion, chart and table design	writing and researching skills, analytics	explain findings, design and submit a paper individually
Publications	release results	creativity, courage	networking, marketing	find and reach a proper audience

Table 1. Summary of Project Phases

Discussion

During the research project, I used different domain practices in order to bring up the best ideas and get the most out of the cooperation and to gain the best results.

The benefits of the project include several layers.

First of all, points of pedagogy: multi-method learning tools and several collaboration methods were applied and tested. The project as a whole proved that diverse digital and offline approaches enforced and kept students engaged/involved in the project, in particular because of the goals and objectives were set by the common understanding of the group. Turning a group into a team happened more smoothly than expected, and a blended, multicultural mix of participants was able to cooperate easily. Moreover, team members became soon enthusiastic about a meaningful, desirable goal and engaged in a shared project with individual outcomes.

The second cluster of benefits showed up on the students' side. Project participants, in a complex process, had to employ their existing competences and personal abilities, while they also developed their skills in cooperation, creativity, and they gained knowledge at a new field of expertise. Processing "OPERA" and participating in public debates, classroom discussions, they all needed to be involved in the goals, they had to cooperate, brainstorm, use their rhetorical skills, and argue for their suggestions. Designing the survey, they were obliged to obtain micro research on previous external studies. Reviewing the literature[10], we encouraged students to browse mostly online open-access academic sources. Setting answer options, they were required to be creative, prudent and reasonable.

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[10] For the literature review, a brief manual was provided for participants. A short introduction to Google Scholar practice, useful links for open access research outputs, the most influential thinkers' websites were available in the Google Classroom project tutorial section. Submitting manuscripts, each student received a tutorial revision; getting help to correct mistakes and lacks the work. The final versions completed generally in 2-3 rounds.

Collecting data from 30 different countries, students challenged the use of social media to find proper respondents from the selected target countries. Analyzing the results, data conversion, developing charts, and searching the additional literature required to use or even learn new digital skills. Submitting the papers, participants added a valuable and thoughtful contribution to their background. Being a part of a research project, they obtained a unique readiness that may be put on their resumes or CVs in the future, building their personal brand as a prospective candidate for further study programs, fellowships, or desirable job offers.

For a broader expert audience, findings of the study can be informative and compelling too. Although the research was not based on representative sampling, the outcomes confirmed the previous results, adding some remarkable new details to them. Publishing data through an open-source database allowed further studies to become available for a wide circle of professionals.

For the lecturer, combining different roles was extremely hard. Being a facilitator, project leader, supervisor, academic writing advisor and research conductor at the same time was challenging sometimes but undoubtedly engaging.

Finally, the host institute, Milton Friedman University, also got benefits and positive contribution to its brand and benchmark. The study papers published in six languages, in 22 versions, do gain some publicity to the institute indeed.

Summary: planting together, harvesting individually

The above-explained study project is a potential source of ideas and experiences for those who are seeking good practices in higher education. For the project, neither extra instrumental or financial contribution, nor particular infrastructure was needed, so it is highly recommended for those looking for innovative, efficient and low-cost educational solutions[11]. Agile approach as a framework delivered a fresh and efficient mindset that helped to keep the eyes on the goals and it prompted participants to be engaged during the entire project. Cooperation and teamwork was not a purpose in itself[12] – it was a part of developing useful future proof skills and learning strategies and it also contributed to each individual's advantage: a paper published under one's own name by each team member. It was a far more tangible result than a grade or credit that they obviously also achieved.

Altogether, the benefits and returns of the project were more numerous than a regular university course could achieve; likewise participants, the lecturer, the host university and in a broader sense HR professionals as the target audience of the findings.

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[11] Learning agile approach in education, there are many tutorial and learning opportunities
(e.g.: https://www.agileineducation.org/examples.html Last download 12.08.2019.) can be found. Some of them voluntary based, sharing best practices in a community. An offspring handbook (ed. Parsons and MacCallum 2019) guides beginners from theory to practice of lean, agile principles and Kaizen.

[12] Despite co-operative games and learning became a buzzword in education; there are voices against the non-competitive models. "In reality, children gain nothing from the manufactured forms of tokenistic rituals that accompany such emotionally correct gestures. When every child receives a prize for 'trying their best,' the youngsters readily see through the empty gesture. Even at an early age they understand that when nobody loses, nobody wins." (Furedi, 2010, p.14.)

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