

# EMEX Courses 2019-2021 – Retrospective Overall Evaluation



EMERGING MEDIA EXPLORATION



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**Project Consortium:** University Babelsberg KONRAD WOLF (Germany); Tampere University (Finland); Tampere University of Applied Sciences (Finland); University of Lincoln (United Kingdom); University of Central Lancashire (United Kingdom)

# EMEX Courses 2019-2021 – Retrospective

## Overall Evaluation

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## Introduction

At the start of the EMEX project, ideas and goals of all partners regarding the project were collected in a joint kick-off meeting.

A final survey intended to assess the implementation of these initial ideas and goals.

The survey consisted of 56 questions, 52 of which were scale questions and 4 open questions. The questions were divided into 3 main sections: LEARNING; APPLICATION and OPPORTUNITIES that were used in the kick-off.

Eleven of the twelve consortium members completed the questionnaire.

All questions whose answers showed large variations were discussed in a final consortium meeting among the partners at the end of August.

The most important findings are summarised in this document.

## LEARNING

This section of the survey covers all the original ideas and goals for learning outcomes on the part of students, teachers and industry.

Legend: strongly disagree = 1 / strongly agree = 5  
Statements discussed are marked in **bold**

No	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	Median	σ
Q1	In the courses students were encouraged to look beyond their own discipline.	5	5	4	4	4	5	5	4	4	4	5	4	4,5
Q2	In the courses students expressed their ideas freely and openly to others.	4	4	4	4	5	4	4	4	4	4	4	4	4,1
Q3	In the courses transparency was encouraged.	5			5	4	4	4	5	4	5	5	5	4,6
Q4	Mentors facilitated creative risks that created intellectual property.	5	4	4	4	3	4	3	5	5	5	5	4	4,3
Q5	<b>The students were introduced to, and learned about open source tools and programs (like Blender)</b>	4	5	3	5	2	5	4	4	4	4	4	4	4,0
Q6	All persons involved (teachers, students, industry partners) learned to think differently about problems and to go from interdisciplinarity to transdisciplinarity.	3	4	4	4	4	4	5	5	3	4	5	4	4,1
Q7	Among the consortium I learned about emerging media production processes through sharing.	4	5	3	4	5	4	5	5	4	4	5	4	4,4
Q8	We dealt well with heterogeneous skill levels in teaching.	4	4	3	4	3	5	4	5	4	5	5	4	4,2
Q9	<b>Heterogeneous skill levels posed a problem for me.</b>	1	3	4	3	3	1	3	3	2	1	5	3	2,6
Q10	During EMEX the collaboration between consortial partners improved.	4	4	4	5	4	5	4	5	3	4	5	4	4,3
Q11	EMEX enabled us to stay ahead of emerging and future trends.	3	5	5	5	4	4	4	4	4	5	5	4	4,4
Q12	I learned from other partners: teaching and learning practices, application of tools and good practices.	5	5	3	3	5	3	5	5	4	5	5	5	4,4
Q13	I have gained or deepened insights into companies and industries.	3	5	3	5	4	4	4	5	4	5	5	4	4,3
Q14	Overall I am satisfied with the learning outcomes (for students, industry and myself)	4	4	5	5	4	5	5	4	4	5	5	5	4,5

### Questions discussed

**Q5:** The idea of to teach the students to work with different open source tools and programmes was not really realistic, as the participants usually did not know these tools at the start of the project and therefore did not take their advantages and possibilities into account when developing ideas.

At the beginning of each course, ideas have to be produced first. For their implementation, various tools or programmes are useful, but not necessarily those that should be taught according to our planning.

One could say that this is a chicken-and-egg problem: you don't have a project without a tool, but you need a project to use a tool.

In the time-constrained EMEX courses, which were often in addition to the normal study programme, it was difficult to get participants to learn a new tool. Another challenge is that the participating universities have a different focus on learning tools in general and that participants in the mixed group have very different backgrounds.

**Q9:** The statement: "Heterogeneous skill levels posed a problem for me.", was rated very differently on the scale of 1-5.

In this regard, the question arose of how to integrate participants with a low level of skills or even absent skills concerning a certain matter.

The consortium agreed this is a challenge that should be tackled in the future.

For industry partner rbb, it was overall difficult to anticipate expected skill levels, which makes collaboration a little more challenging.

Over the years, but also within a course, the different levels of the groups varied greatly from one another.

### Open questions regarding learning learning outcomes

The answers to the open question in the LEARNING section speak for themselves and need no further explanation. One common denominator, however, is that the necessary restrictions imposed by COVID 19 have led to reduced practical experience.

Q15	Question	Answers
	What learnings regarding students, EMEX partners, industry partners and myself were missing or could have been improved? (Please specify which groups you are referring to)	<ul style="list-style-type: none"> <li>• Students: being more visual helps. / EMEX partners: More learning from each other / Industry: How to motivate students, creating win-win situations.</li> <li>• I feel we do not have the right balance with regard to the expectation of the final outcome. While we got good results, it was difficult to give a good idea of the nature of the result to be expected. And we should teach even more to prototype technology without the actual technology.</li> <li>• The only thing was the one thing that we weren't able to do because of COVID... access volumetric studios and witness students transitioning from online to face-to-face group work.</li> <li>• Planning of the project by students could perhaps have been encouraged to learn team work and project management (I saw great</li> </ul>

		<p>differences between groups in how they managed the work vs. how much they relied on the teacher tutors)</p> <ul style="list-style-type: none"> <li>• Hands-on production aspects unfortunately limited</li> <li>• For students, I feel that there was a balance with how structured the teaching was. The courses were on the unstructured side which seemed to be challenging for some students but overall it worked for all, at least in some way. Of course, it is hard to evaluate learning, especially how well learners remember the things they learned and how well they can apply these things in new challenges. So I don't know if something should be done differently but more structured courses and teaching would probably benefit some. Perhaps the learnings could be compiled to some kind of documentation which participants could refer to later.</li> <li>• It is a shame that COVID19 resulted in the physical workshops and student mobility being limited in the 2nd and 3rd years. This would have provided us more opportunities for students to work closer with the industry partners in the production of the prototypes.</li> </ul>
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## APPLICATION

The APPLICATION section covers all application areas, methods and technologies that were originally intended to be integrated.

Legend: not at all = 1 / very much = 5  
 strongly disagree = 1 / strongly agree = 5  
 Statements discussed are marked in **bold**

No	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	Median	ø
<b>During the courses the participants learned about:</b>														
<b>Q16</b>	<b>Volumetric video scanning</b>	2	4	4	5	3	2	4	4	3	4	5	4	<b>3,6</b>
<b>Q17</b>	<b>Immersive storytelling</b>	4	4	4	5	4	2	4	4	3	4	5	4	<b>3,9</b>
<b>Q18</b>	Interactive storytelling	4	3	4	5	4	3	4	4	3	5	5	4	<b>4,0</b>
<b>Q19</b>	Self organised work in authentic context	5	5	4	4	4	4	4	4	4	5	5	4	<b>4,4</b>
<b>Q20</b>	<b>Sensor-based wearables</b>	1	4	4	4	1	2	4	3	2	4	5	4	<b>3,1</b>
<b>Q21</b>	<b>Hybrid storytelling with AR/VR</b>	1	3	4	5	3	3	4	3	2	5	5	3	<b>3,5</b>
<b>Q22</b>	Game Engines, Realtime Animation and 360° Video	4	4		5	4	5	4	3	4	4	5	4	<b>4,2</b>

<b>Q23</b>	Social and cultural conditions for emerging media	5	4	4	5	3	4	4	4	3	5	5	4	<b>4,2</b>
<b>Q24</b>	Human centered design, UX, design thinking or other design methods	5	5	4	5	5	3	4	3	3	5	5	5	<b>4,3</b>
<b>Q25</b>	Conceptual development and prototyping	5	5	4	5	5	3	4	4	4	5	5	5	<b>4,5</b>
<b>Q26</b>	XR (AR, MR, VR)	3	4	5	5	3	4	4	4	3	4	4	4	<b>3,9</b>
<b>Q27</b>	Speculative and Critical Design	4	4	4	4	4	4	4	4	3	4	4	4	<b>3,9</b>
<b>Q28</b>	Creating future scenarios that can serve as demos for existing services and shows.	4	4	4	4	3	5	5	4	3	5	4	4	<b>4,1</b>
<b>Q29</b>	Real Time in VFX	3	4	4	4	2	5	4	3	2	4	5	4	<b>3,6</b>
<b>Q30</b>	Creative methods	4	5	4	5	5	4	5	4	3	5	5	5	<b>4,5</b>
<b>Q31</b>	Working cross disciplinary and using emerging media beyond media settings	5	4	4	5	3	5	5	4	5	5	5	5	<b>4,5</b>
<b>Q32</b>	<b>Validating initial industry concepts</b>	1	4	4	4	2	4	4	4	2	4	5	4	<b>3,5</b>
<b>Q33</b>	Innovative storytelling formats	4	3	4	4	3	3	4	4	4	4	5	4	<b>3,8</b>
<b>Q34</b>	Novel uses of media tools	4	4	4	5	3	4	4	4	3	5	5	4	<b>4,1</b>
<b>Q35</b>	Overall I am satisfied with the application of the goals and ideas regarding Academia and Industries.	4	4	5	5	4	5	4	4	4	5	5	4	<b>4,5</b>

### Questions discussed

**Q16 / Volumetric video scanning:** Low quality setups for Volumetric Video Scanning should be available onsite in order to be able to teach the basics to all students.

**Q17 / Immersive Storytelling:** A lot of experts on immersive storytelling were included in the courses, but many of them were focused on the technology and less on the immersive story itself. It would probably have helped to share more ideas between groups and teachers.

It also has to be noted that we started every course from scratch in terms of the technological skills of the students and regarding the course content.

### **Q20 / Sensor-based wearables:**

Sensor-based wearables should be a topic for the future. Wearables were not integrated into the EMEX courses because emerging media is a broad topic, and we had to find common determinators.

### **Q21 / Hybrid storytelling with AR/VR:**

In order to be able to include this very specific kind of topic, we could have integrated more “storytelling” in the courses and thus we would have had to narrow our goals to storytelling or the relevant technologies.

### **Q32 / Validating initial industry concepts:**

Validation is a long-term project.

The focus for the courses was on future concepts, using new technologies.

This was not well aligned with project partners.

RBB: “The concepts we got were much farther away from where we are as a broadcaster.”

Since we were only working with media students rather than with business students, validating concepts was not possible in entirety.

### Open question regarding Applications

Q36	Question	Answers
	What applications regarding students, EMEX partners, industry partners and myself were missing or could have been improved (please specify which groups you are referring to).	<ul style="list-style-type: none"> <li>• Industry partners: Briefs of industry partners were not treated. This could be improved.</li> <li>• I feel the scenario aspect could have been stressed more, i.e. developing the context of an application together with the prototype.</li> <li>• Think we pretty much covered everything realistically possible given the situation.</li> <li>• There was a lot to learn and some topics remained somewhat shallow --- which is understandable. E.g. regarding HCD, methods on user research and evaluation/testing could have been improved (students; i.e. strong emphasis and lot of time was spent on ideation and design but user research and evaluation/testing with users were minimum; remote setting should not prevent these, remote methods for these could have been introduced).</li> <li>• Perhaps AI and Machine learning could have been addressed.</li> </ul>

## OPPORTUNITIES

The OPPORTUNITIES section covers all ideas and goals which were originally intended.

Legend: strongly disagree = 1 / strongly agree = 5  
Statements discussed are marked in **bold**

<b>Q37</b>	<b>EMEX served to feed back into our own curriculum.</b>	2	4	4		5	5	4	5	3	5	5	4,5	<b>4,2</b>
<b>Q38</b>	<b>We embedded exchange activities in our own curriculum.</b>	2	5	4		4	1	4	3	1	4	5	4	<b>3,3</b>
<b>Q39</b>	<b>Transnational projects and teams evolved beyond courses.</b>	2	3	3		2	4	4	4	2	4	5	3,5	<b>3,3</b>
<b>Q40</b>	During the 3 years intercultural relationships were developed.	5	4	4		4	4	4	5	3	5	5	4	<b>4,3</b>
<b>Q41</b>	The courses served as an opportunity to experiment with educational styles and tech formats.	5	5	4		5	5	5	5	4	5	5	5	<b>4,8</b>
<b>Q42</b>	I discovered new application domains for emerging media.	3	4	4		3	5	5	5	3	5	5	4,5	<b>4,2</b>
<b>Q43</b>	We leveraged complementing skills in remote co-teaching well.	4	4	4		5	5	5	5	3	4	5	4,5	<b>4,4</b>
<b>Q44</b>	EMEX enabled us to develop new learning and approach shared modules.	4	4	4		4	5	5	3	4	5	5	4	<b>4,3</b>

<b>Q45</b>	<b>EMEX managed to bridge tech-industry and the academic sector.</b>	3	5	5		4	4	4	4	2	4	5	4	<b>4,0</b>
<b>Q46</b>	We found ways to bridge between industry and research.	3	4	4		4	4	4	4	2	5	5	4	<b>3,9</b>
<b>Q47</b>	We managed to build up a partner network (like T-Labs, VRBB, ...)	3	4			3	4	3	4	3	4	5	4	<b>3,7</b>
<b>Q48</b>	<b>We developed an “Off the shelf” collaboration scheme for industry partners.</b>	2	5	3		3	4	3	2	2	3	5	3	<b>3,2</b>
<b>Q49</b>	We collaborated with creative and digital SMEs. (Subject-Matter-Experts)	5	5	4		5	2	4	3	2	5	5	4,5	<b>4,0</b>
<b>Q50</b>	<b>There were courses in which broadcasters actively engaged with students.</b>	4	5			3	2	5	5	4	5	5	5	<b>4,2</b>
<b>Q51</b>	Industry partners engaged as mentors or advisors for the participants.	4	5	4		3	4	5	5	4	5	5	4,5	<b>4,4</b>
<b>Q52</b>	Students worked on projects that provided value for the industry.	4	5	4		3	5	4	4	3	3	5	4	<b>4,0</b>
<b>Q53</b>	The student projects met the needs of the industry.	4	4	4		3	4	4	4	3	4	4	4	<b>3,8</b>
<b>Q54</b>	Overall I am satisfied with the opportunities used.	4	5	5		4	5	4	4	4	5	5	4,5	<b>4,5</b>

### Questions discussed

Most of the extremes on the scale are due to the fact that individual universities have taken advantage of opportunities and others have not or could not.

#### **Q37-38 / EMEX served to feed back into our own curriculum:**

The University of Lincoln developed a new curriculum that was informed by the EMEX courses. TAMK also integrated a module for emerging media, but wants to integrate an Introduction Course for Emerging Media as well.

#### **Q39 / Transnational projects and teams evolved beyond courses.**

It surely depends on the group, but we should find a way to support team evolution and networking beyond courses.

#### **Q45 / EX managed to bridge tech-industry and the academic sector.**

Approaching industry was easy, but we built the bridge only half-way. Interviews between students and industry partners were very successful. EMEX fostered also local cooperation with YLE.

#### **Q48 / We developed an “Off the shelf” collaboration scheme for industry partners.**

We did not develop an “Off-the-shelf” scheme but instead we managed to develop various building blocks for collaboration with industry partners.

#### **Q50 / There were courses in which broadcasters actively engaged with students**

Broadcasters especially engaged with students in the onsite course that took place. For Olli-Pekka (YLE) it was interesting to gain insight into how students are thinking.



**Open questions regarding Opportunities:**

	<b>Question</b>	<b>Answers</b>
Q55	<p>What opportunities regarding students, EMEX partners, industry partners and myself were missing or could have been improved (please specify which groups you are referring to).</p>	<ul style="list-style-type: none"> <li>● Again, the opportunities were only really restricted because of our inability to get together in the physical domain...</li> <li>● (SIDE NOTE: I was not sure about answers to some questions in this category, "3" = I don't know)</li> <li>● Somehow, getting full benefits from the network of partners would have to require longer time. Especially students require time to gain confidence on issues like these.</li> <li>● It would have been interesting to further develop some of the prototypes and formats with industry partners</li> </ul>
Q56	<p>Do you have any further comments regarding the initial goals and ideas?</p>	<ul style="list-style-type: none"> <li>● The project results fit the original project goals well. The only major point missing is that I would have wished for more continuity of student participation throughout the courses, i.e. also students who take those courses consecutively.</li> <li>● Nothing. I believe the project met its aims and although it was severely disrupted, that only only meant that we had to adapt which we did very well. It's been a really enjoyable and useful experience.</li> <li>● Overall this was a successful project that largely delivered on the initial objectives, despite the obvious disruptions that were out of control. Whilst student mobility opportunities were limited, I feel we did an excellent job at adapting to the circumstances, with the final online course with multiple briefs producing some of the strongest student work and effective transdisciplinary collaboration.</li> </ul>

## **Insights and Conclusions**

The EMEX project started with a lot of ideas and initial goals. Especially in the area of applications, these were too numerous to be implemented in their entirety.

This is especially true as it was not possible in the international context to have courses build on each other; it was unrealistic for student groups to maintain the same topical focus for several semesters. Every course began again from the beginning.

For many partners, the different skills levels were clearly the biggest challenge (see Q9). The question of how to better integrate students with low skills is an issue that needs to be addressed in the future.

The consensus is that the EMEX courses have been a very good opportunity to experiment with educational styles and tech formats.

Overall, all partners are very satisfied with the results of the project, which is evident from the positive evaluation of the questions Q14, Q35 and Q54.