

## **Assignment Report**

### Contextual Inquiry and Contextual Analysis

Alessia Ruggeri

Thomas Tiotto

Sumeet Gyanchandani

Luca Costa

Heng Xin Fun

## **Concept Statement**

There is untapped resource of knowledge and experience in a community that anyone can use to learn any skill. Teach2Learn is a free mobile and web-based app that aims to connect people who want to receive personalized tutoring. Everyone has some knowledge or expertise that they can share with others. Community members will share their expertise and time to teach others and in return they will receive hours to learn from other tutors. One hour of your time for one hour of someone else's time. Not everyone is a great teacher. A profile with a rating system will be used to show an individual's knowledge and teaching quality. A time economy will grow, ensuring everyone is getting quality time from the community. Direct messaging in the app will be used to facilitate communication and scheduling. A calendar system will be available so people can easily schedule lessons. Let's help each other reach our fullest potential.

## **Descriptive Summary**

Teach2Learn will be an application that will connect people who want to learn with people who are experts in their area.

## **Contextual Inquiry and Analysis : Introduction**

The purpose of this assignment was to get a contextual understanding of how our users learn and teach. We wanted to gather raw data through interviewing and observing through story telling how our users like to teach and learn. The following report explains the method and activities for the contextual inquiry and analysis. Finally it presents the requirements that we extracted from the contextual analysis.

## **Contextual Inquiry**

### **Users and Stakeholders**

Primary user and stakeholders are the people who want to learn a new skill, and the teachers who want to share their skills. Secondary and Tertiary users are perhaps friends or family who are around the primary user who may also be interested in learning and teaching. Other stakeholders would be universities and teaching schools, that could be interested in using some meeting tools for lectures.

## **Process**

The contextual inquiry was conducted using a semi-structured interview format. Semi-structured format was most appropriate because teaching and learning is a broad subject. Individual users have a variety of ways of how they prefer to learn and teach. Semi-structured allowed more flexibility for the interviewer to explore the different contexts and motivations of the user, and extract more information. This format forced the interviewer to have greater responsibility in probing the user to extract better quality data and understanding how, why, when the user likes to learn and teach.

## **Contextual Inquiry Preparation**

### **Interview Questions**

A good selection of system, goal, work-flow and attitude oriented interview questions were designed to explore as many different dimensions of learning and teaching as possible (included in the appendix). The questions were designed to be broad to apply to many users, but also specific to certain situation or motivation.

### **Interviewing**

Ground rules were set before the interview. Interviewers were expected to be more passive, but probing and let the user guide the discussion. Interviewers should not mention learning from a specific source such as an application or website. Interviewers should be inquisitive and not judgemental. Interview should be conducted in a comfortable place for the user.

### **Selection of Interviewers**

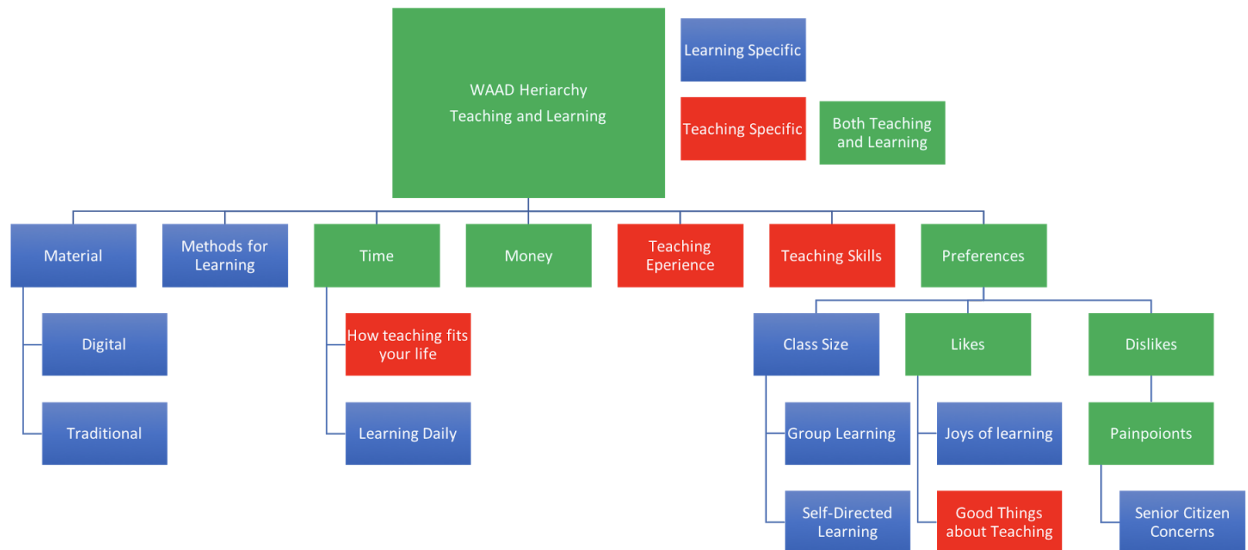
A diverse background of users were selected to make sure that the data would roughly represent an adequate sample of users. In total 9 people were interviewed.

### **Interviewee Information:**

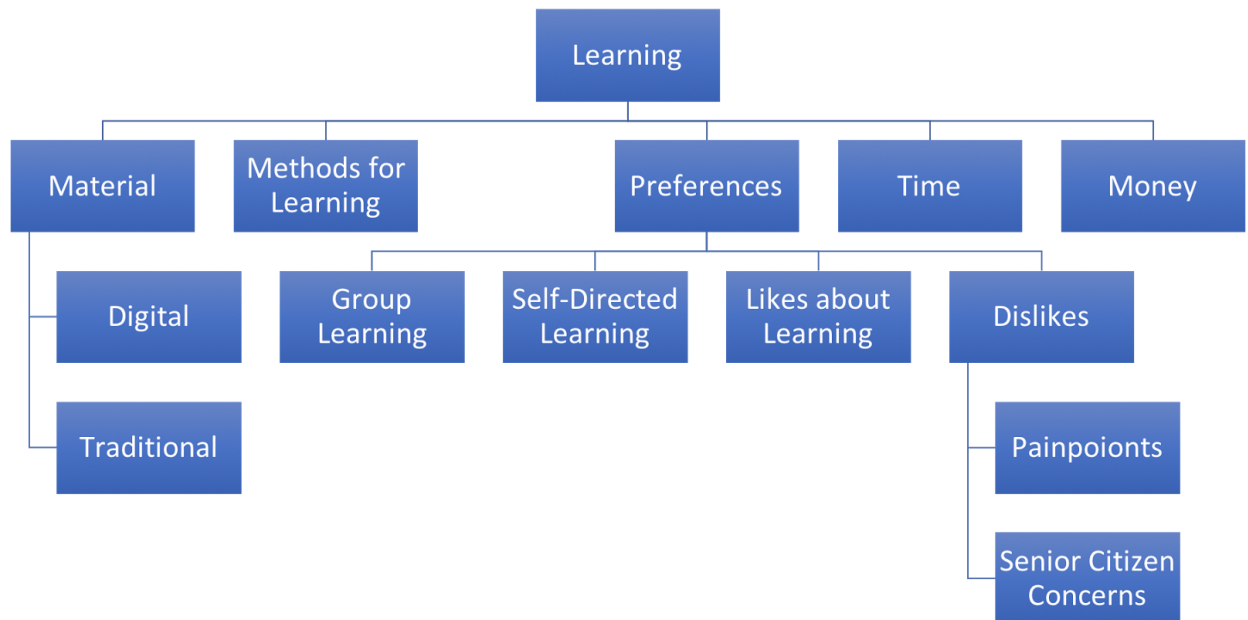
1. User Y (Female, 27) Working Professional, Primary source of learning: books
2. User Z (Female, 63) Retired, homemaker, Primary source of learning: application
3. User B (Male, 32) Teacher/Working Professional, Primary source of learning: digital content
4. User R (Female, 24) Student and Tutor, Primary source of learning: university
5. User UGC (Male, 26) Working Professional, Primary source of learning: digital content
6. User UAF (Male 23) Student, Primary source of learning: university
7. User HG (Male, 24) Student, Primary source of learning: university and digital content
8. User SG (Female, 25) Working Professional, Primary source of learning: digital content
9. User M (Female, 59) Retired, Primary source of learning: books

## Contextual Analysis

Overall WAAD hierarchy



WAAD Hierarchy for learning



## **Key observations from our interviews for Learning**

### **Motivation for Learning**

Users at different age of their life cycle have different motivations for learning. For example a university student is constantly learning to prepare themselves for the work force, someone who is a working professional is trying to gain skills to further their career, and finally someone who is older and retired are more likely to lean casually for fun, interest and to maintain their mental sharpness.

### **Digital and Traditional Learning**

From doing the WAAD, we saw two broad categories, digital and traditional learning. Some users prefer to go directly to online resources, such as youtube, podcasts, online articles, or MOOCs. Other users preferred traditional methods of studying in classroom, reading books, and using print materials.

### **Pain points about learning and thing you dislike**

Bad teachers, teachers are not prepared. No quality assurances of learning resources. Unable to get good resource. Not enough opportunities to apply what they learn.

### **Need for personalized Learning**

Users prefer to have personalized teaching and material. Having a prepared teacher who really knows the content well is important to their learning. Having access to material so they can practice is important.

### **Preferences for Learning in groups or alone**

Some users preferred to learn alone, because they focused better. Other like to learn in groups because there is social pressure to go to class so it is easier for them to stay motivated.

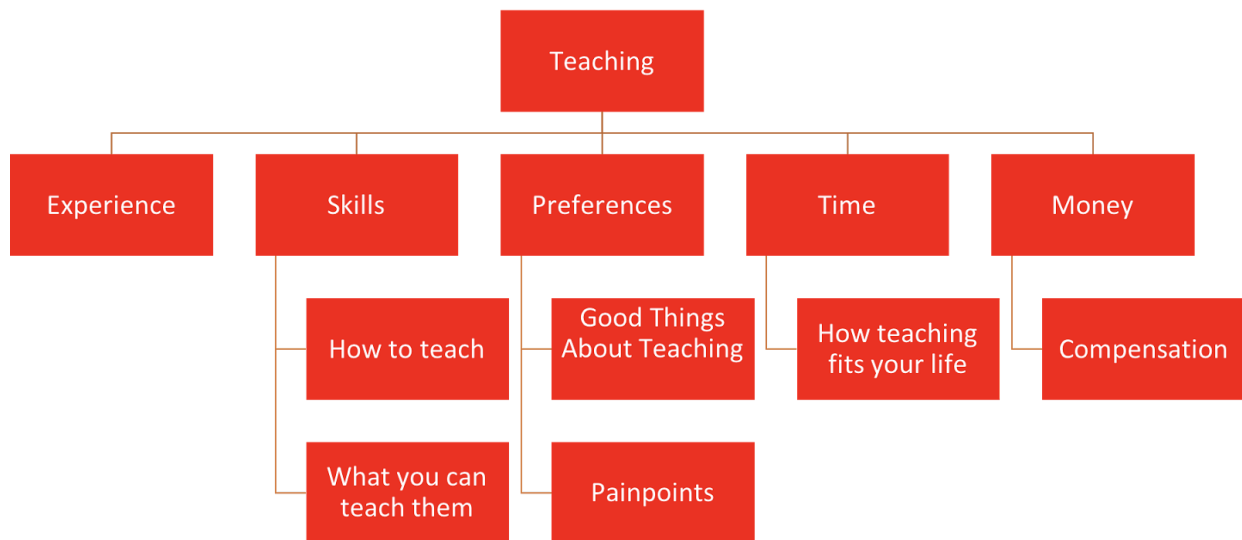
### **Time**

People prefer to have the opportunity to learn daily. Because it allows them to compound their growth in learning.

### **Money**

People have paid for quality teachers.

## WAAD Hierarchy for teaching



## Key observations from our interviews for Teaching

### **How teaching fits your life**

Like for learning also users interested in teaching have different motivations. From our interviews emerged different types of people, one kind use teaching as a way to deepen their knowledge or simply because they like to teach and help others, the other kind is more interested in work related teaching and see what they do as a mean to establish their role in a group as an expert in that particular domain. A few users have difficulty justifying teaching because have a busy life and teaching it's not their primary income.

### **Compensation**

All the interviewed users are used to receiving compensation, most of the time is a monetary compensation but it's not always the case, sometime they do it as long that they receive a gratification from the act.

### **Pain points**

The users feel that teaching is stressful when they have problematic students, however even when we factor out this problem every students it's different and teacher need to deal with user that have a variety of backgrounds and a variety of learning preference. This makes it harder for the user to decide to teach because they are not confident enough and they feel it as an additional responsibility that are not always willing to take.

### **How to teach**

Teachers have their methodologies for teaching and some of them have prerequisites like having a good group synergy or having the possibility to refer to previously shared materials. Most of them has expressed the need of having to teach their students by having a direct and continuous communication, this way they are able to understand if everybody is following their explanation. When asked this question most of the users think about how they can personalize their teaching for their students.

**Good things about teaching:**

Teaching makes the users feel good about themselves, it gives confidence about their knowledge and helps them learn how to interact and manage a group, therefore they consider it helpful also for their work.

**What you can teach them:**

Users first choice of what they would like to teach is usually the subject they feel it's their main expertise, but when we considered other statements we also noticed that they would also like to teach different kind of subjects, even those who themselves are still learning because it helps them consolidate their knowledge or because they find more fun to teach a particular topic.

**Requirements**

These are the requirements that has been extracted from the contextual analysis and the key observations from the interviews. Requirements represents the needs that users have expressed during the interviews and that will be useful to know how to design for the final user experience.

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| <b># 1</b>             |   |
| <b>Requirement:</b>    | <b>Older people need help to supplement their learning</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"><li>● H-Older People<ul style="list-style-type: none"><li>○ L-5-Z</li><li>○ L-6-M</li></ul></li></ul> |
| <b>Rationale:</b>      | It is harder for older users to remember material, they need to take notes or review them, so it's easier to grasp.                     |

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| <b># 2</b>             |   |
| <b>Requirement:</b>    | <b>Need for quality material</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"><li>● L-Pain Points<ul style="list-style-type: none"><li>○ L-5-SG</li><li>○ L-5-SG</li><li>○ L-12-N</li><li>○ L-5-Q</li></ul></li><li>● N-Liking about Learning<ul style="list-style-type: none"><li>○ L-4-SG</li></ul></li></ul> |
| <b>Rationale:</b>      | Difficulty in assessing the reliability and quality of online learning sources.   |

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| <b># 3</b>             |  |
| <b>Requirement:</b>    | <b>Need for personalized learning</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● L-Pain Points <ul style="list-style-type: none"> <li>○ L-8-Y</li> <li>○ L-5-R</li> </ul> </li> <li>● S-How to Teach <ul style="list-style-type: none"> <li>○ T-2-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | The teaching should be as relevant as possible to the situation of the student.  |

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| <b># 4</b>             |  |
| <b>Requirement:</b>    | <b>Users need to have well-prepared and good teacher</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● L-Pain Points <ul style="list-style-type: none"> <li>○ L-14-B</li> </ul> </li> <li>● N-Liking about learning <ul style="list-style-type: none"> <li>○ L-13-B</li> </ul> </li> <li>● S-How to Teach <ul style="list-style-type: none"> <li>○ T-18-R</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Need to know if teacher is prepared, has a good teaching quality and knowledge about the topic and knows how to teach. Teacher needs to be inspiring.  |

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| <b># 5</b>             |  |
| <b>Requirement:</b>    | <b>Users need to be able to practice and do exercises</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● L-Pain Points <ul style="list-style-type: none"> <li>○ L-4-L</li> </ul> </li> <li>● N-Like about Learning <ul style="list-style-type: none"> <li>○ L-13-SG</li> <li>○ L-13-R</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users want to apply what they have learned.  |

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| <b># 6</b>             |   |
| <b>Requirement:</b>    | <b>Opportunity to learn daily</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● A-Time <ul style="list-style-type: none"> <li>○ All-A</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users need to learn daily   |

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| <b># 7</b>             |   |
| <b>Requirement:</b>    | <b>Need to form good groups</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● C-Group Learning <ul style="list-style-type: none"> <li>○ All -C</li> </ul> </li> <li>● S-How to Teach <ul style="list-style-type: none"> <li>○ T-9-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | People need the option to be able to learn in groups, to stay motivated: people who get-on with each other learn much better.   |

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| <b># 8</b>             |  |
| <b>Requirement:</b>    | <b>Choice for one to one learning</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● D-Learning from someone <ul style="list-style-type: none"> <li>○ L-7-HG</li> <li>○ L-8-Z</li> <li>○ T-11-M</li> <li>○ T-11-U</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Preference for one-to-one learning, because people need an expert and one-to-one guidance to learn efficiently.  |



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| <b># 9</b>             |   |
| <b>Requirement:</b>    | <b>Need to know the course topics</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● I-Motivation for Learning <ul style="list-style-type: none"> <li>○ L-10-Y</li> <li>○ L-10-R</li> <li>○ L-10-UAF</li> <li>○ L-6-B</li> <li>○ L-Z-8</li> <li>○ L-6-UAF</li> </ul> </li> <li>● T-What you can teach <ul style="list-style-type: none"> <li>○ T-6-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Access to courses relevant to professional career and to a wide variety of topics.  |

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| <b># 10</b>            |   |
| <b>Requirement:</b>    | <b>Need to have courses material</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● I-Motivation for Learning <ul style="list-style-type: none"> <li>○ L-6-Z</li> <li>○ L-4-M</li> </ul> </li> <li>● S-How to teach <ul style="list-style-type: none"> <li>○ T-18-B</li> <li>○ T-2-SG</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Courses need to be satisfying and fun: they need to have case studies, examples and hands-on exercises.   |

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| <b># 11</b>            |   |
| <b>Requirement:</b>    | <b>Course content should be divided</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● B-Methods to Learn <ul style="list-style-type: none"> <li>○ L-9-B</li> <li>○ L-5-HG</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Material has to be divided into smaller amounts more manageable.  |

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| <b># 12</b>            |  |
| <b>Requirement:</b>    | <b>Need for a visual feedback</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● B-Methods to Learn <ul style="list-style-type: none"> <li>○ L-7-R</li> <li>○ L-1-R</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Visual feedback is important for users who prefer visual learning.   |

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| <b># 13</b>            |  |
| <b>Requirement:</b>    | <b>Need for a digital platform</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● G-Digital Learning <ul style="list-style-type: none"> <li>○ L-7-R</li> <li>○ L-1-R</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Convenient access to learn.  |

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| <b># 14</b>            |  |
| <b>Requirement:</b>    | <b>Searchable information in a digital platform</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● G-Digital Learning <ul style="list-style-type: none"> <li>○ L-1-SG</li> <li>○ L-1-HG</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Need for searchable content and one point of access to information.  |

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| <b># 15</b>            |   |
| <b>Requirement:</b>    | <b>Access to books</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● E-Traditional Learning <ul style="list-style-type: none"> <li>○ All-E</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users need books for reference and reading.   |

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| <b># 16</b>            |  |
| <b>Requirement:</b>    | <b>Users that teach need to be compensated</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● P-Money <ul style="list-style-type: none"> <li>○ All - P</li> </ul> </li> <li>● M-Money <ul style="list-style-type: none"> <li>○ All-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users (Teachers) are used to being compensated for teaching.   |

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| <b># 17</b>            |  |
| <b>Requirement:</b>    | <b>Users (Teachers) would to like teach when they have the time, so that it doesn't impact their life</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● O-Affect Life <ul style="list-style-type: none"> <li>○ L-5-SG</li> <li>○ L-5-SG</li> <li>○ L-12-N</li> <li>○ L-5-Q</li> <li>○ T-7-M</li> </ul> </li> <li>● N-Liking about Learning <ul style="list-style-type: none"> <li>○ L-4-SG</li> </ul> </li> <li>● R-Pain Points <ul style="list-style-type: none"> <li>○ T-7-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users (Teachers) feel that the teaching isn't a center part of their life hence they have other priorities that need their attention.  |

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| <b># 18</b>            |  |
| <b>Requirement:</b>    | <b>Teacher should be able to limit the class size</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● U-Teaching Audience <ul style="list-style-type: none"> <li>○ T-11-M</li> <li>○ T-11-SG</li> <li>○ T-26-B</li> <li>○ T-12-Y</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Teachers feel comfortable to teach on an average a class size of 10 people.  |

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| # 19                   |  |
| <b>Requirement:</b>    | <b>Users need a way to keep in touch</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● U-Teaching Audience <ul style="list-style-type: none"> <li>○ T-1-Y</li> <li>○ T-3-U</li> <li>○ T-3-SG</li> <li>○ T-1-U</li> <li>○ T-3-Y</li> </ul> </li> <li>● V-Experience <ul style="list-style-type: none"> <li>○ T-4-SG</li> </ul> </li> <li>● Q-Good things about Teaching <ul style="list-style-type: none"> <li>○ T-4-Y</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | <p>Most of our teachers have taught people they know personally. Keeping in touch with your students to know, if your teaching has benefited them; this provides teacher gratification and validation.</p>   |

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| # 20                   |  |
| <b>Requirement:</b>    | <b>Teachers would like to gain deeper understanding of the topics they teach</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● Q-Good things about teaching <ul style="list-style-type: none"> <li>○ T-20-A</li> <li>○ T-24-A</li> <li>○ T-6-SG</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | User feel that teaching a topic helps them gain a better understanding of it.  |

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| # 21                   |   |
| <b>Requirement:</b>    | <b>Pupils be able to rate their expertise level for the topic</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● R-Pain Points <ul style="list-style-type: none"> <li>○ T-20-B</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | It is difficult to teach a class with different levels of expertise.  |

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| <b># 22</b>            |  |
| <b>Requirement:</b>    | <b>There needs to be a way to rate users</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● R-Pain Points <ul style="list-style-type: none"> <li>○ T-5-Y</li> <li>○ T-5-M</li> </ul> </li> <li>● T-What you can teach <ul style="list-style-type: none"> <li>○ T-4-M</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | <p>One of the biggest pain points in teaching is having bad/unreceptive pupils in your class.</p> <p>Teachers need to be rated so that they and the other student can access their teaching skills.</p>                                  |

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| <b># 23</b>            |   |
| <b>Requirement:</b>    | <b>Users need a good learning and teaching platform</b>   |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● R-Pain Points <ul style="list-style-type: none"> <li>○ T-5-SG</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | Users feel that there a lack of legit medium to teach.  |

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| <b># 24</b>            |  |
| <b>Requirement:</b>    | <b>Users need to be able to share teaching material</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● R-Pain Points <ul style="list-style-type: none"> <li>○ T-10-SG</li> <li>○ T-5-SG</li> </ul> </li> </ul>   |
| <b>Rationale:</b>      | <p>Teachers should be able to access material on a topic, makes it easier to teach, if the material has good case studies and examples.</p> <p>Most of our users are not professional teachers, hence they don't have the time or experience to make their own course materials.</p> |

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| # 25                   |   |
| <b>Requirement:</b>    | <b>Users need to be able to communicate with each other in real time</b>  |
| <b>Source node ID:</b> | <ul style="list-style-type: none"> <li>● S-How to Teach <ul style="list-style-type: none"> <li>○ T-2-U</li> <li>○ T-20-R</li> <li>○ T-2-Y</li> <li>○ T-5-Y</li> </ul> </li> </ul> |
| <b>Rationale:</b>      | <p>Teaching needs to be interactive.</p> <p>Teachers need to know that if their pupils are able to understand what they are teaching.</p>   |

## **Final Remarks**

People want to learn, but surprisingly a lot of people would also love to teach. People want to learn to improve themselves, their careers and to keep mentally sharp as they age. People want to teach things that are meaningful, to them like cooking, not just traditional school subjects, like math.

Our interviewees seem to feel that there are many resources online, but it is difficult to access their quality. They would also like to receive the personalized experience of traditional learning, such as attending classes or having a tutor. Being guided by an expert who cares about teaching would help them.

Most of the people we interviewed would take pleasure in sharing their knowledge with others and in helping other people grow. They would want to do this because it would make them feel good and meaningful.

## **Appendix A - Personal interview questions**

### **Demographic Questions:**

1. Age?
2. Sex?
3. Highest Education?
4. When did you last graduate? When did you conclude your School?
5. What work do you do?

### **Learning Questions:**

6. How do you learn something new? What do you do when you want learn something new?
7. How much time do you typically take on learning new things?
8. Tell me about the last time you tried to learn something new?
9. What do you like about how you currently do your learning?
10. What is the biggest pain point related to learn something new?
11. Do you try to continue learning? Is learning new things important to you?
12. Do you feel comfortable learning from someone, or in group?
13. What type of options have you used to learn a new thing, or which you have available?
14. How do you make learning easier for you?
15. How does learning affect your life, career, work?
16. Have you ever paid to learn something?
17. What do you like or dislike about other methods for learning?
18. What was your best learning experience? Why was it the best?
19. What was your worst learning experience? Why was it the worst?

### **Teaching Questions:**

20. When was the last time you taught something to somebody?
21. Would you like to teach somebody?
22. Do you have skills you would want to teach others?
23. How would you teach somebody?
24. If you taught someone before, who did you teach?
25. What is the biggest pain point related to teaching something?
26. Do you try to continue teaching? Is teaching new things important to you?
27. How does teaching affect your life, career, work?
28. Have you ever been paid to teach something? Would you like to?
29. What was your best teaching experience? Why was it the best?
30. What was your worst teaching experience? Why was it the worst?
31. How many people do you feel comfortable teaching to?

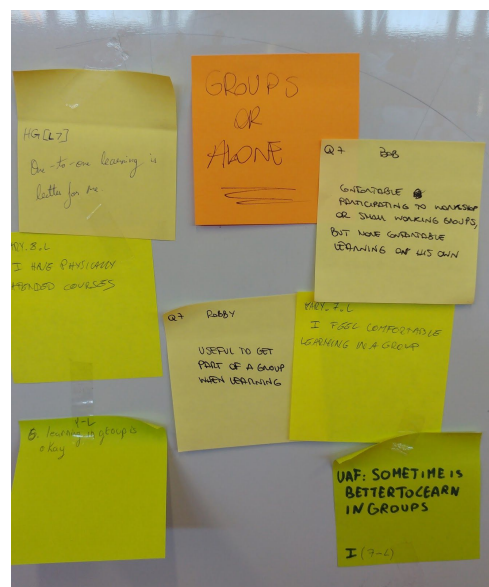
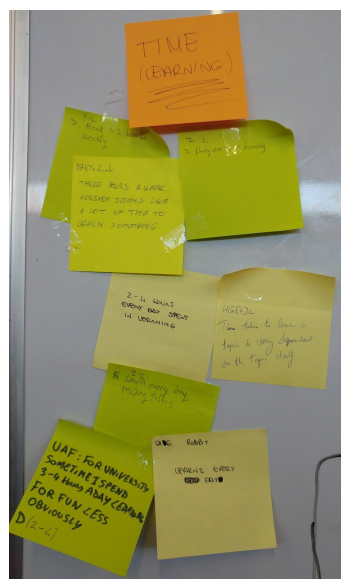
## Appendix B - Work Activity Affinity Diagrams

## LEARNING CATEGORIES



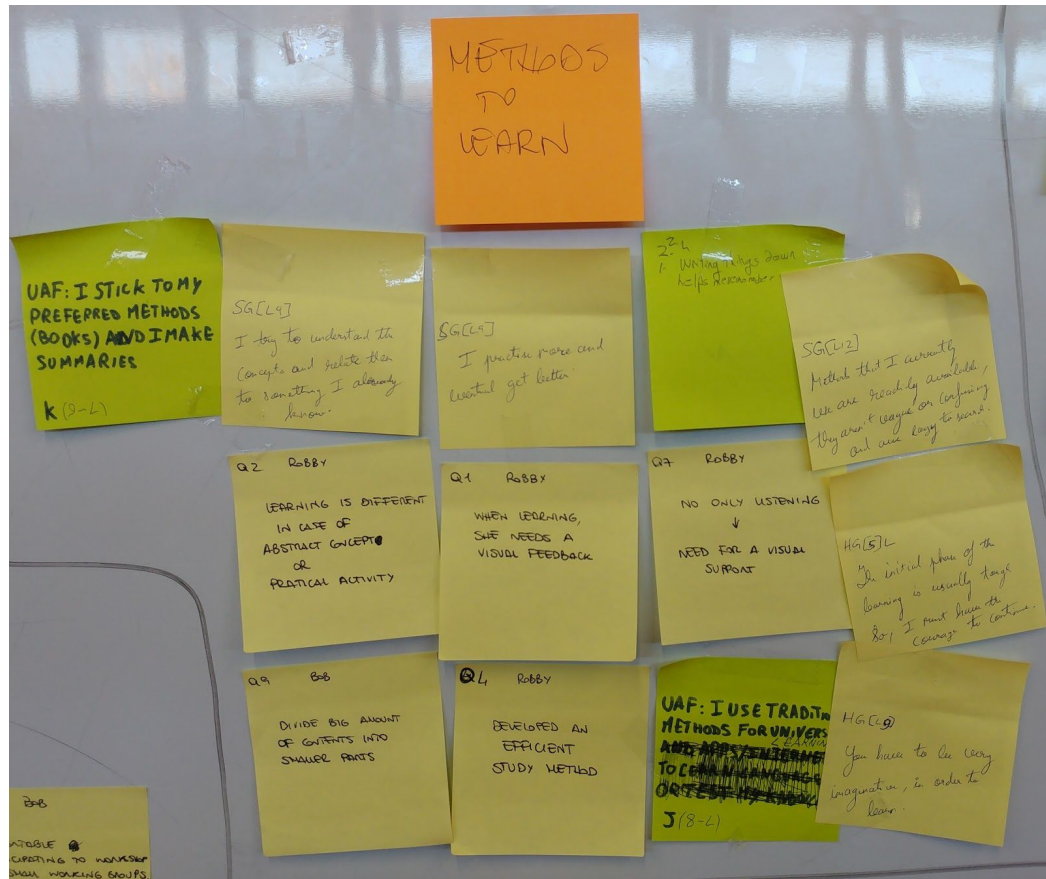
## Time

### Groups or Alone

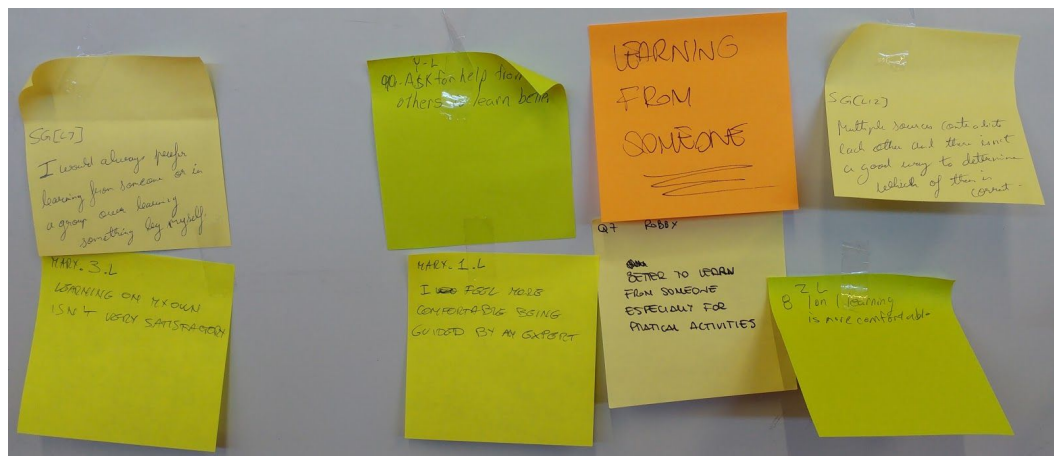




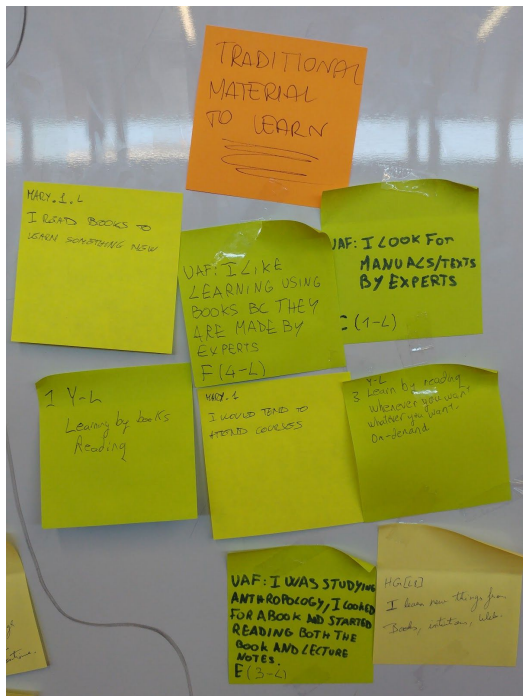
## Methods to learn



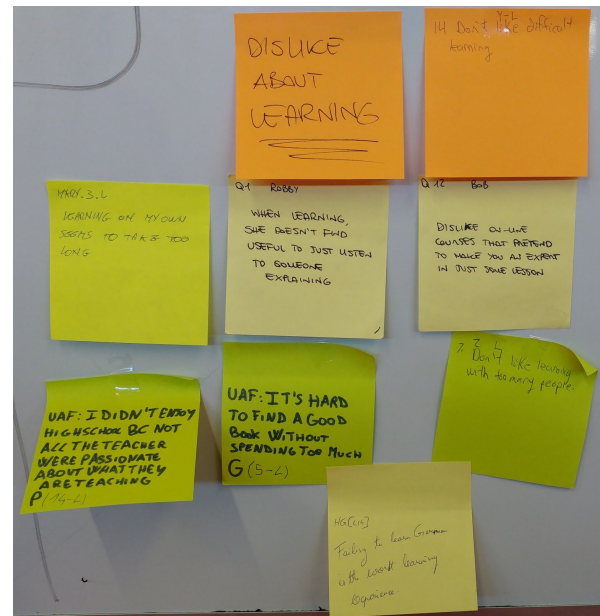
## Learning from someone



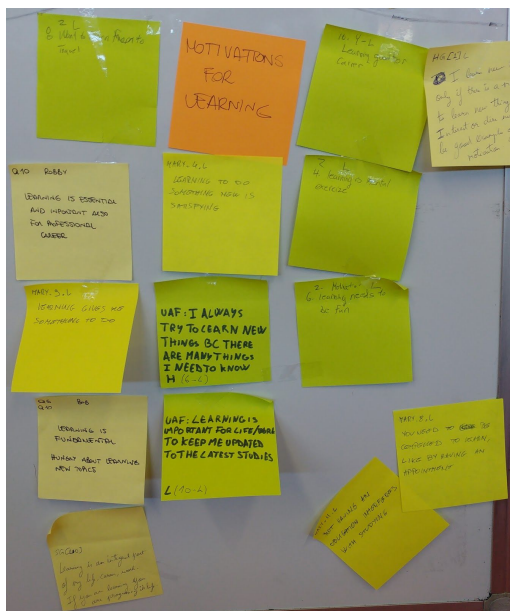
### Traditional learning material



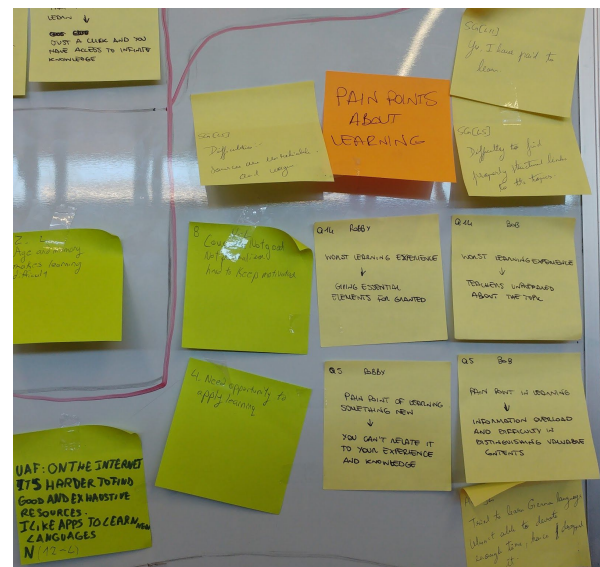
### Dislike about learning



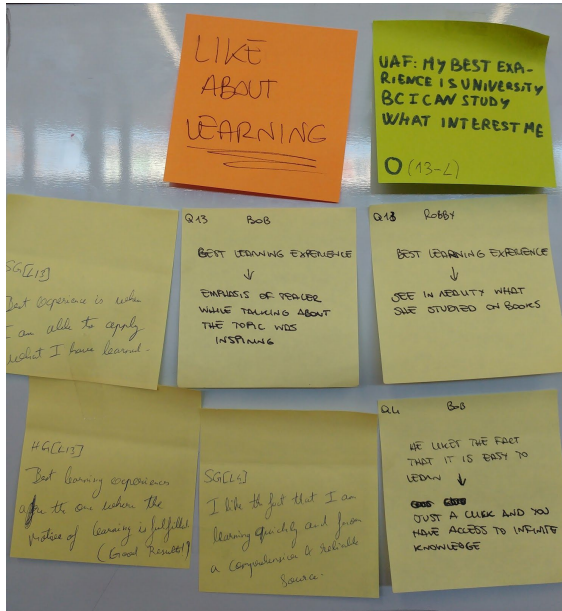
## Motivations for learning



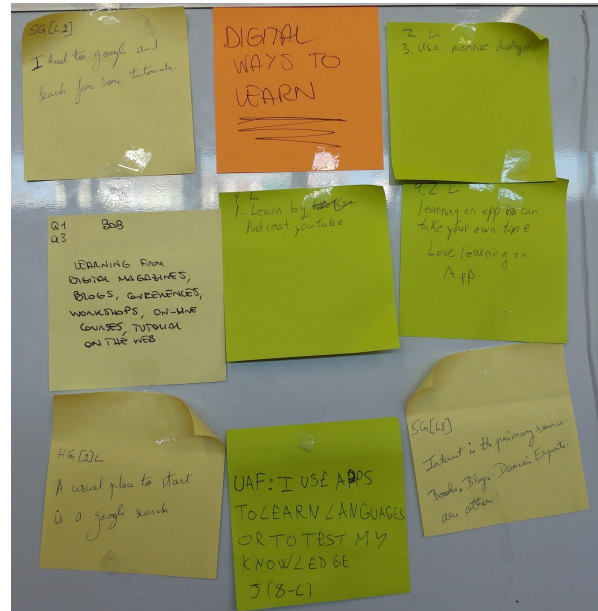
### Pain points about learning



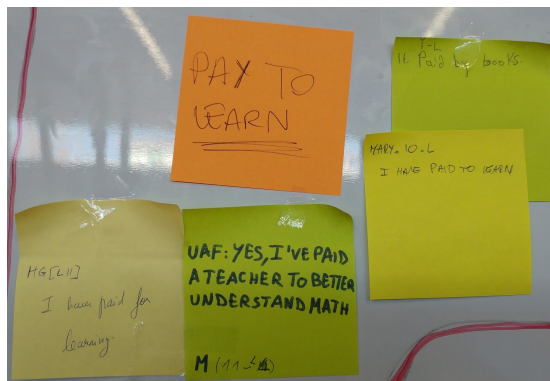
## Like about learning



## Digital ways to learn

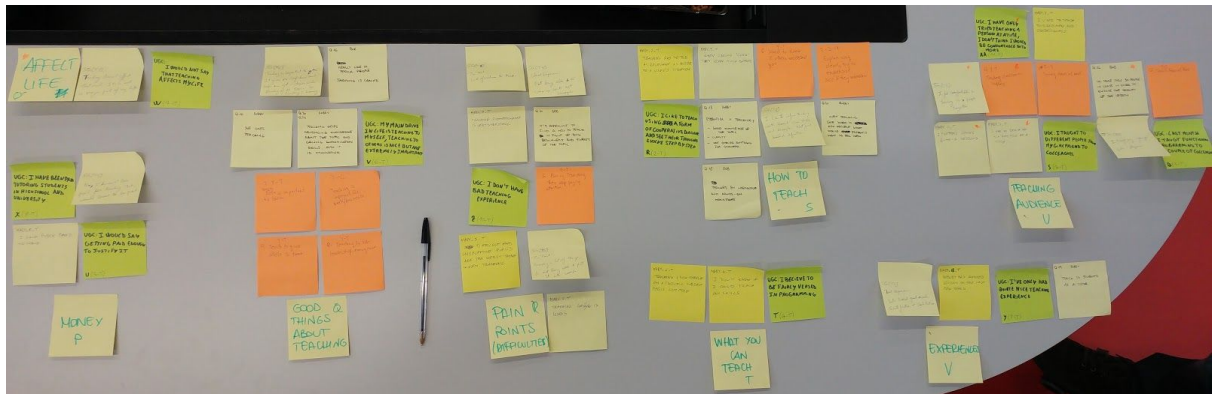


## Pay to learn

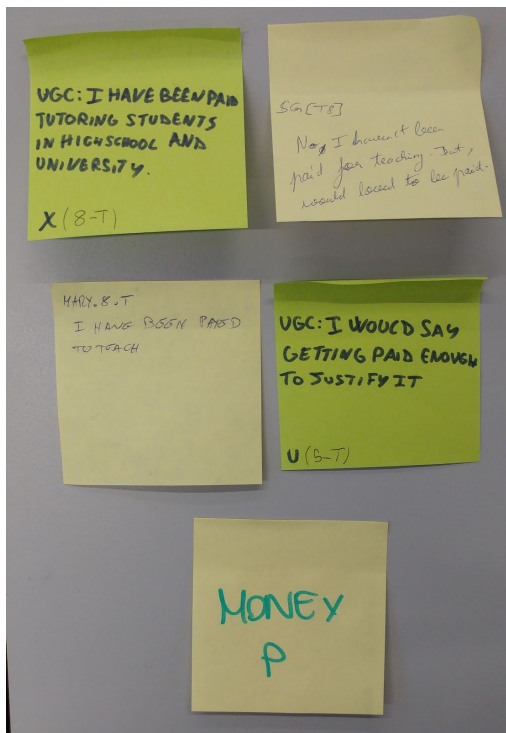




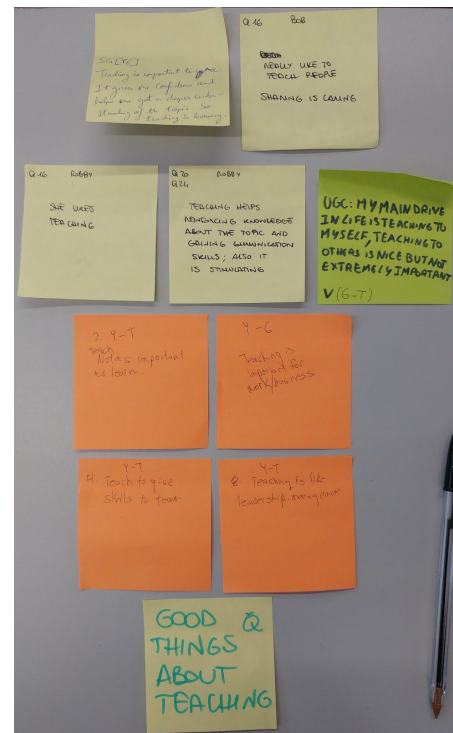
## TEACHING CATEGORIES



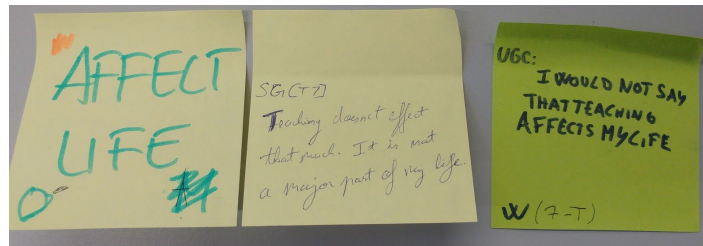
### Money



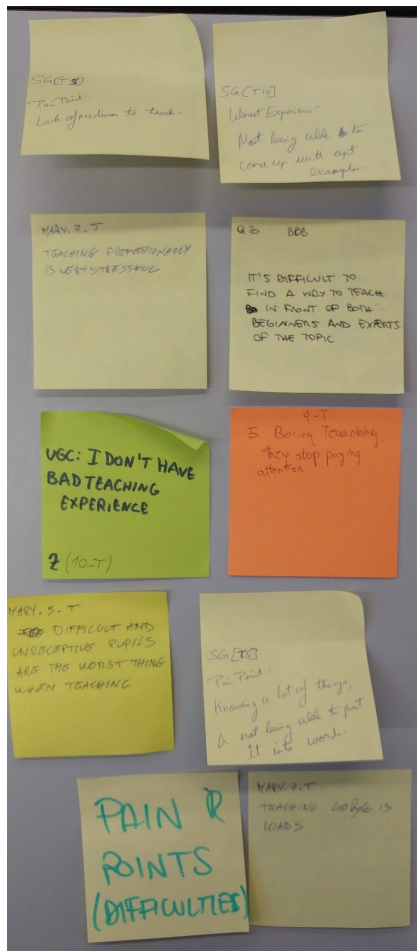
### Good things about teaching



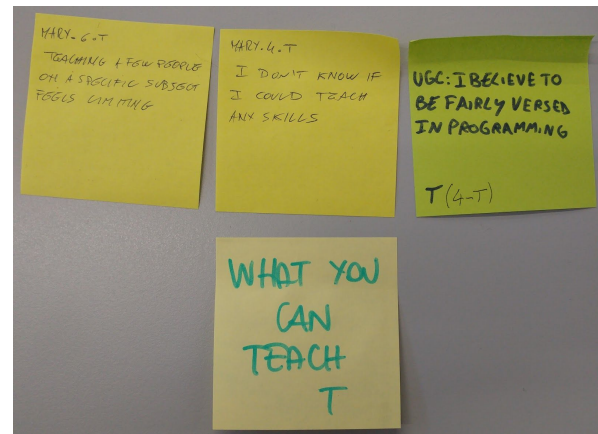
## Affect life



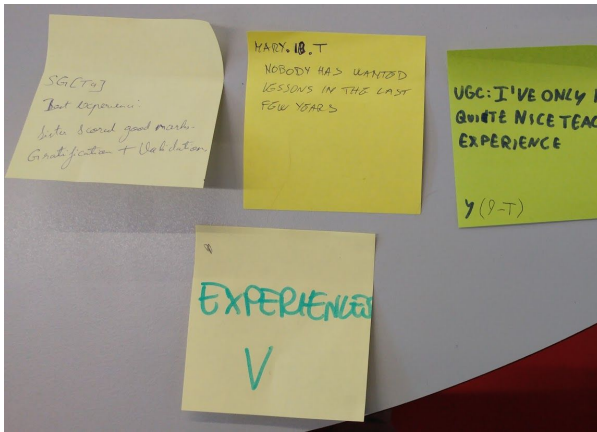
## Pain points



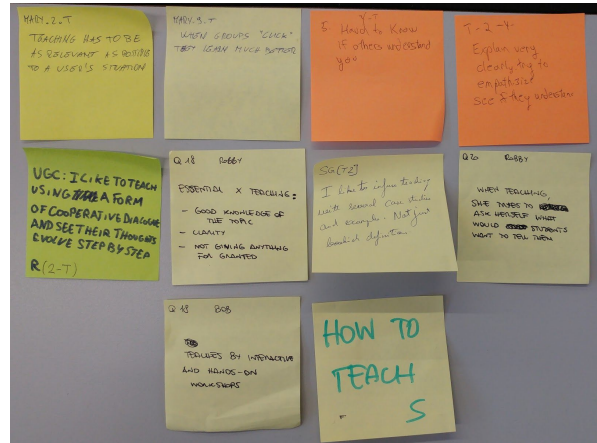
## What you can teach



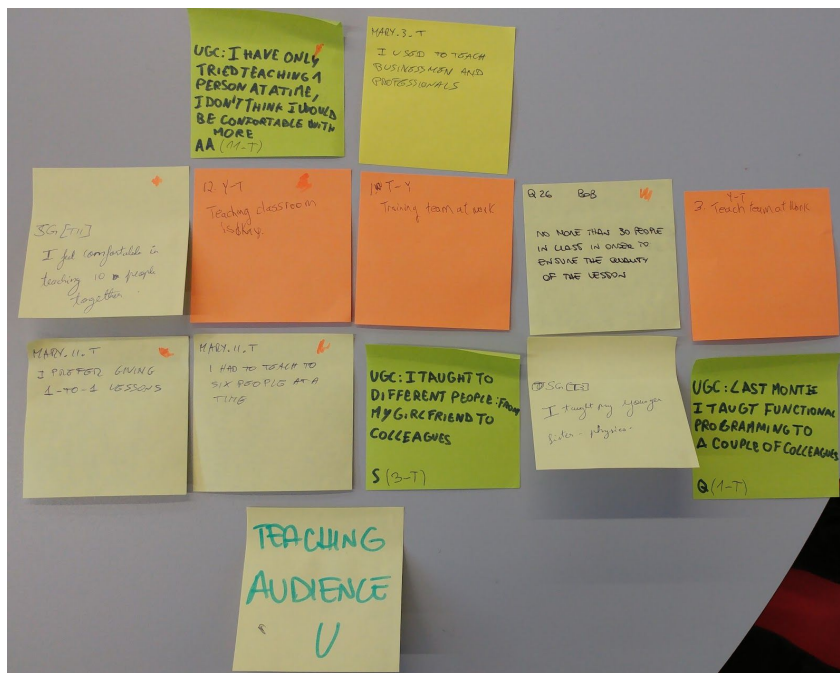
## Experiences



## How to teach



### Teaching audience





## Appendix C - Teachers

