**Meeting DFKI, DTASF, CARITAS, 18.9.2020 12-1pm**

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Note taker: Akbar Topic: Language course coordination – MAS scenario

1) What is the scenario?

2) What are the benefits for teacher and TCN?

3) What are the constraints to assess the language level of TCN?

4) What are the constraints to formulate groups of TCNs?

5) What are the constraints to assign the exercise to a group or a TCN?

Summary:

In this coordination scenario TCN agents coordinate among themselves to jointly determine an optimal assignment of their TCNs to working groups with individual and possibly group exercises in a lesson of the course subject to individual constraints of TCNs and global constraints of assignment such as level of progress of TCNs - and propose this assignment plan to the course instructor (teacher).

Some questions to be further clarified by user partners DTASF and CARITAS as soon as possible:

1. what would be individual, personal constraints of TCNs for the assignment (each TCN has assumed objective to maximize individual progress)

* permanent: e.g. "never put me in a group smaller than 2, group members should all be female, preferably from my home country
* temporary: e.g. "I cannot attend the next lesson due to an appointment, but willing to keep up or join a stronger group, ..."

1. How to (computationally) measure/assess individual progress levels for TCN in quantifiable and qualitative terms? hat are the checked constraints (to be formalized), input and decision variables, constants, values and scales used for such progress assessment?
2. How to obtain the input values for such assessment scheme from the Welcome app (by the agent)
   1. for actual lesson
   2. over previous lessons (cumulative)

out of what results of assigned individual exercises (on the Welcome app) ?

out of what exercises of working group the TCN is member of ?

* problem: How to automatically quantify the contribution of the TCN to the working group

execise result? How to obtain the results from the input over the Welcome app alone?

1. What are global constraints of assignment from the teacher? e.g. minimal/maximal size of working group, group members at least progress level X but at most Y, at least 75% of individual TCN with satisfied individual constraints, ....

Some more notes:

1) Let's assume, the course is 40 hours long. It should last for 8 weeks, each with 5 hours. Each lesson would be on a different topic. Each TCN should attend to all the lessons. In a class, let's assume that there are 20 TCNs. They would be divided into groups of 4 or 5 TCNs based on their language skill level such as ability to read and write. Each group can be assigned with different levels of exercises. After the lesson, TCNs will be assessed based on how well they have done the exercises. And then they will be grouped based on the latest assessment after each lesson. Consequently, teacher will get all TCNs involved in each lesson.

2) The Welcome application will help teacher to organize groups and to assign exercises. The purpose is to decrease the load on teacher given the high number of TCNs.

Each TCN will be able to learn better in a group of people where they all have similar level of language skills. They will be able to learn with the people they prefer. Furthermore, they won't be compared with much knowledgeable students if they don't wish.

3) For agents to be able to assess TCNs' language level (from course instructor/teacher’s view), they must know the input features/variables for and the global assessment constraints of progress levels. For example, how well they did in an exercise, how active is a TCN during a lesson and etc. These constraints must be provided by User Partners (specifically by language teachers). How can these input features for assessment be obtained via the Welcome app?

4) For agents to be able to divide TCNs into different groups, they must have constraints. For example, the language level of a TCN, personal preferences such as gender, country of origin, liking/disliking and etc. All constraints/information must be provided either by teacher or by TCN. An agent assumes that it will get all necessary information without any problem.

5) If teacher wants the agents to propose a suggestion about the exercises to assign to a group of TCNs, then all exercises and constraints must be known by agent beforehand. That means, for a certain language level, there must be predefined set of exercises provided to agents.

To provide agents with all necessary constraints (dynamic and static), other partners must be involved such as Centric and SHU for UI development, Caritas for teacher constraints and etc. Therefore the plan in this scenario is as following.

Firstly, teachers give feedback about this scenario.

Once, the scenario is clarified and verified by teachers, User Partner (Caritas and DTASF) and DFKI, and then other partners will be informed and added for further discussion of implementation.