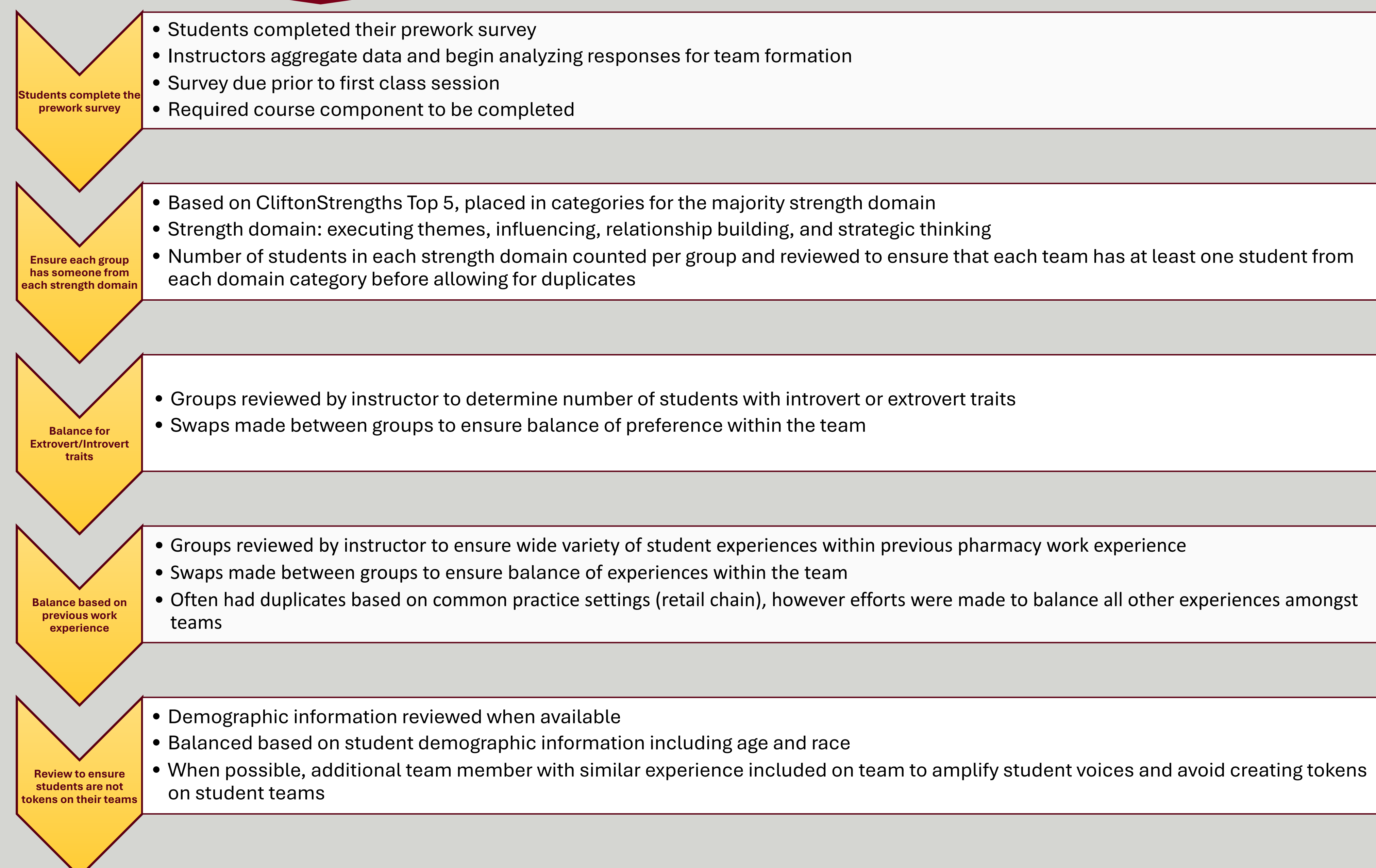# LESSONS LEARNED:
Group Formation for Team Based Learning and Next Steps

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BACKGROUND

- The TBL Users group at the University of Minnesota College of Pharmacy was tasked with creating a process for creating TBL teams in the newly designed curriculum
- Prior to the new curriculum:
  - Randomization was a common methodology for creating TBL teams
  - Several different methods of creating teams used across the different years and courses
  - Anecdotal results on how best to formulate teams
- There is no unanimous consensus on the optimal approach for creating teams within the literature
- Diversity can refer to culture, race, and gender, and it also can refer to disciplinary backgrounds, individual academic strengths, and skills
- **Objective**: Describe one College of Pharmacy's innovative approach to TBL highlighting the implementation and outcomes of a structured methodology for creating diverse, inclusive student teams and outline next steps for integration of this method into curriculum revision

METHODS

- The second-year pharmaceutical care skills laboratory course created teams
- Teams were used across the other courses during the semester
- Information was gathered from students regarding their CliftonStrengths, demographic information, introversion/extroversion traits, and pharmacy work experience through an instructor-developed survey administered before the first class session
- Teams were created using the stepwise method outlined in the "Process" figure to the right
- Students were placed into groups of 6-7 students
- A student evaluation was administered at the end of the semester to gather feedback from students regarding their experiences in TBL groups
- Data was collected for both the Fall 2023 and Spring 2024 semesters that used this methodology
- Deidentified student responses were analyzed using thematic analysis

- A total of 107 student responses were obtained
  - 47 students across both campuses responded in the Fall 2023 semester
  - 60 students across both campuses responded in the Spring 2024 semester
- Thematic analysis of student evaluations revealed five prominent themes: teamwork, collaboration, and relationship building; knowledge assessment and reinforcement through discussion; exposure to other perspectives; application of skills; and exercising critical thinking and problem-solving.

PROCESS

Students complete the prework survey
- Students completed their prework survey
- Instructors aggregate data and begin analyzing responses for team formation
- Survey due prior to first class session
- Required course component to be completed

Ensure each group has someone from each strength domain
- Based on CliftonStrengths Top 5, placed in categories for the majority strength domain
- Strength domain: executing themes, influencing, relationship building, and strategic thinking
- Number of students in each strength domain counted per group and reviewed to ensure that each team has at least one student from each domain category before allowing for duplicates

Balance for Extrovert/Introvert traits
- Groups reviewed by instructor to determine number of students with introvert or extrovert traits
- Swaps made between groups to ensure balance of preference within the team

Balance based on previous work experience
- Groups reviewed by instructor to ensure wide variety of student experiences within previous pharmacy work experience
- Swaps made between groups to ensure balance of experiences within the team
- Often had duplicates based on common practice settings (retail chain), however efforts were made to balance all other experiences amongst teams

Review to ensure students are not tokens on their teams
- Demographic information reviewed when available
- Balanced based on student demographic information including age and race
- When possible, additional team member with similar experience included on team to amplify student voices and avoid creating tokens on student teams

RESULTS

Theme	Representative Student Quotes
Teamwork, collaboration, and relationship building	• [I enjoyed] the team portions of the TBLs, so the tRATs and applied exercises. I learned so much more when I heard my teammate's ideas and viewpoints. • Being able to work collaboratively with peers to problem solve • Communicating with the team and discussing everyone's thought process
Knowledge assessment and reinforcement through discussion	• Reviewing the material, coming prepared, and using the material in a group work setting • They integrated contents from previous and current courses very well that made me review and refresh my knowledge • Made me review concepts constantly which consolidated my understanding
Exposure to other perspectives	• Being able to work with other students on patient cases, and seeing all the different approaches to help the patient was helpful to be able to fine-tune some of our methods of therapy. • The TBLs forced us students to discuss our thought processes and work through disagreements that we had. • The most valuable aspect of the TBL in this course is hearing other people's opinions and thoughts during TBL sessions because it stimulates my learning and critical thinking.
Application of skills	• It really stimulated discussion in our group and allowed us to challenge each other or to give an open space for peer teaching. • The TBLs forced students to engage in valuable conversations about the course material that we would not have if it were not for these exercises
Exercising critical thinking and problem-solving	• Being able to support and learn through my team discussion allowed me to expand my knowledge and understanding. • Getting to discuss ideas and opinions with my team, we got to help each other every session and we all definitely improved because of it.

DISCUSSION

- Student evaluations of teaching reveal positive feedback regarding team dynamics and students' enjoyment of working in teams.
  - Students appreciated learning from peers with different backgrounds and hear other thought processes
  - Allowed students to apply their skills in a team setting
- Results re-enforce historical findings of low conflict amongst teams using this methodology
- Time to develop the beginning of the semester survey was minimal and can be reused year to year
- Areas for efficiency identified:
  - Synergizing with Office of Student Services to assist with student demographic information
  - Collaboration with College DEIA experts to further support all student learning
- Limitations:
  - Student self-reported perceptions
  - Single cohort of students surveyed

NEXT STEPS

- Teams now have 5-7 members
- New teams are created at the start of each block (semester)
- Process Implemented:
  - Step 1: Randomization
  - Step 2: Review group for strength distribution using the CliftonStrengths
  - Step 3: Ensure all groups have a member with "influencer" as one of their top 2 domains
  - Step 4: Ensure that groups that have BIPOC learners in them do not only have one BIPOC learner. By having two or more, this amplifies the BIPOC voice - now comes from OSS
- Implemented for all semesters except for the Fall P1 semester as students have not completed the CliftonStrengths at that time
- Plan to analyzing team performance, cohesion, inclusion, social loafing, teamwork satisfaction, student engagement

REFERENCES

FOR A DIGITAL POSTER AND REFERENCES

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