

Team Projects + Team Teaching = Team Building

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Abstract

Architects in the 21st Century are required to work as key leaders of the design team in developing projects from inception to completion. Solid teamwork is essential for success in the architecture profession and the construction industry. Teaching teamwork to undergraduate architecture students has its challenges and rewards.

At the University of Hartford we have chosen to teach our architecture design students team projects through team teaching. Projects involving teamwork offer considerable learning opportunities for the students. Working together and setting an example for students also offers considerable teaching opportunities for design faculty members.

Team-taught courses offer numerous advantages for the students, faculty, administration, institution, and the profession. Many of these advantages will prove beneficial to the architecture students overall learning experience and serve to enhance their team building skills.

The Profession and Team Building

Team building is essential in architecture. A survey of *The Architect's Handbook of Professional Practice*, AIA Press, 1994 reveals the following about architects and teams:

- “Almost everything we do is interactive. Architects spend their professional lives working with other people. Doing that effectively depends on building relationships with others. When people with different personalities work together on an issue or project, they tend to look at it from different points of view. Often, one person sees a side of things that others miss. The best results come from maximizing and building on different strengths that those involved bring to solving the problems.”¹
- “Even the smallest project requires a team of two: an architect and a client. Relationships expand as teams become larger and include office colleagues, consultants, constructors and possibly others”²
- “Self-motivation tends to be an inherent characteristic of people in architecture firms and other professional organizations.”³
- “An effective team is much more than the sum of the individuals who populate it. One of the (project) manager’s challenges is to build the team – actually help team building itself – into an effective working group.”⁴

Characteristics of effective teams include:

- Small enough to convene and communicate easily and frequently
- Discussions that are interactive and open to all members
- Mutual understanding of each other's roles and skills
- Appropriate combination of functional/technical, problem-solving, and interpersonal skills among the members
- A truly meaningful purpose – clearly articulated understood, and advocated for by all members
- A specific set of team goals in addition to individual and organizational goals
- Realistic, ambitious goals that are clear and important to all team members
- A specific set of teamwork products
- A sense of mutual accountability, with members feeling individually and jointly responsible for the team's purpose, goals, approach, and work products
- An ability to measure progress against specific goals
- A sense that “only the team can fail”

Moreover, effective teams have a working approach that:

- Is understood and agreed to by everybody
- Capitalizes on (and enhances) the skills of those on the team
- Provides for open interaction, fact-based problem solving, and results-based evaluation
- Can be modified and improved over time

In the final analysis, projects are advanced and a team designs architecture. Team management is a – perhaps *the* – key to project success.

Architecture Education: Challenges of Team Building

The Department of Architecture at the University of Hartford objective has always been “to prepare students for a variety of professional careers in the design and building industries”. Architecture at the University of Hartford supports the mission of the University while emphasizing an integration of artistic principles, engineering fundamentals, and business understanding with the constant exploration of innovative design. In the academic environment is often proves more difficult to implement team projects based on personalities and individual schedules. Every course is not conducive to presenting a team project. Every project and/or exercise is not conducive to presenting a team project. Despite these potential challenges we have consistently offered a team project in our third year design studio course. The project is a four-week team project, which is part of full 14-week course.

The Project: Master Plan for the University of Hartford

A master plan is a comprehensive study, which provides a detailed survey, evaluation, analysis, and space management strategies for the existing and future buildings and properties of a given

institution. A master plan is an effective tool for managing change and growth while responding to the strategic plan and mission statement of the institution.

The process Master Plan process includes:

1. Inventory – What exists?
2. Evaluation – How does it work?
3. Programming – What do they need?
4. Planning – How do they get it?
5. Implementation Planning – What will it cost and how long will it take?

The Process

In the fall of 2002, Professors Mahaffey and Petry embarked on team teaching 22 third year design students. Each professor brought significant professional and teaching experience to the course. Although the professors had known each other for over a decade, they had never worked together on a professional project. After a brief “kick-off” project, the professors presented the master plan project to the students. Before embarking on team selection, students were asked what they thought was the most positive and conversely negative aspect (or fear!) or working in with a team. Students were quite candid.

Some of their thoughts and concerns prior to working together are as follows:

POSITIVE⁵

- Listening and working with other peoples concepts
- You get to hear other point of views and ideas that are different form yours.
- Less work – things get divided up
- More work can be completed by everyone helping out
- More ideas – Less work per person so each project may be stronger
- It gives everyone in the group a chance to rely on other people (like the real world). It’s a chance to see how other people work and what all your capabilities really are – both under pressure as well as your leadership skills. Could help get work done well before deadline.
- Effort is shared.
- More ideas for the project. Can focus on your part of it more.
- You get to develop people skills and the workload is distributed differently so you can focus on a certain area.

NEGATIVE⁶

- Everyone has different lives, getting together might prove a bit of a challenge
- Not everyone works at the same pace so it could become frustrating for some
- Lazy people – lack of participation
- Finding time to come together to work - if one falls the rest fall
- Slackers!
- If you get a slacker in the group your work will be doubled. Times can be conflicting as

well as social lives could get in the way of meeting times.

- Not being able to pick your own group (if you don't know the other people its hard to make them do their share of it).

Students worked asked if they preferred the faculty selection of teams or self-selection. They generally agreed to self-select. Three teams each of five to six students self-selected themselves. The final team was made up of those that for a variety of reasons had not found a team. During the master plan process, some of their concerns were encountered. Schedule is always an issue with college students. Leaders and followers were found. For some the process was quite smooth and for others more difficult. At the final review the self-selected teams faired better. Their work was more complete and appeared to be more evenly divided. The group that came together randomly and issues with scheduling, accountability, and dedication.

After the final review students were asked the following follow-up questions⁷:

1. What worked well?

- Everyone was open-minded. No arguments.
- Our ideas and how we combined them into what I thought was a good plan.
- When the work needed to be done we accomplished the task at hand.
- The hard work in the group was evident. We knew what needed to be done and it got done.
- Dividing the work between the group.
- Good communication
- Teamwork was excellent.
- The spirit of the team.

2. What did not work as well?

- Where to start? On the whole we got along well, but sometimes there were some fights over what was more important.
- It was difficult sometimes to get a common time for everyone to meet.
- Nothing, we had a great time working together.
- Collaboration of all work into ONE final project.

3. Did this team help bring out your best?

- It helped me in how I look at a project and approach it.
- Yes – I choose not to elaborate.
- Not really, but it helped me understand different ideas that other people have.
- NO
- Bring out the best, not in design or ideas but in communication and helping me see things from different angles.
- It helped me work harder to help my team.
- I feel since I only had part of the project to do, I could focus more time on that piece.

4. Would you have done it differently?

- More focus on presentation.
- Nothing! The team worked very well.
- Get our priorities in order a little bit faster
- I would have put more input into what I thought should be done and worked harder and longer on it.
- Crack down on those who thought they could go home for 3 out of 4 weekends and not make up any work.
- Rehearsed more.
- Given ourselves more time to work on the project

5. Was the time frame perfect, not enough, or too much?

- The time frame was perfect; we worked to the very end.
- Looking back, it was probably just enough; an extra day would have helped though.
- I think less time would have been more beneficial as more people would have stuck around to get done if they felt the pressure sooner.
- Enough time, we just didn't utilize it the best way.
- Perfect

Closure

Teamwork is essential to the architectural process. Teaching teamwork and design simultaneously has its challenges. For Professors Mahaffey and Petry, working together as teachers provided not only an example for their students to see individuals with often divergent ideas getting along and finding common ground but also provided these architect/educators with a personal learning experience. Although they are no longer teaching together they are currently collaborating on a professional project. Clearly, team building has its rewards!

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Biographical Information:

Elizabeth Petry, AIA has over twenty years in the profession. Her work has focused primarily on education, healthcare, and housing. She is the graduate coordinator for the architecture department at the University of Hartford. Elizabeth holds a BS in Architectural Studies and M.Arch from the University of Illinois, Urbana-Champaign.

Fredrick Mahaffey, AIA has over fifty years in the profession and is now semi-retired. His work had focused primary on healthcare projects and more recently on residential. Professor Mahaffey has traveled the globe and sketches and paints to document his travels. Fred holds a professional architectural degree from Yale University.