

SWST STUDENT CHAPTERS: A VALUABLE MEANS OF BROADENING STUDENT PERSPECTIVES IN WOOD SCIENCE AND TECHNOLOGY

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Abstract. SWST Student Chapters exist to broaden student perspectives in wood science and technology. This is pursued through the organization of various activities, including seminars, site visits, and practical experiences. Over the years, chapters have proven to be beneficial to students, first and foremost, and also to faculty advisors and involved institutions. To encourage the activation of new chapters, the know-how of faculty advisors of the existing chapters is here shared. The details on constituting and running SWST Student Chapters are illustrated, the opportunities that chapters offer are discussed, and a list of possible activities is provided for guidance.

Keywords: Education, SWST, wood science, wood technology.

INTRODUCTION

The Society of Wood Science and Technology (SWST) Student Chapters provide unique opportunities for undergraduate and graduate students to network and to broaden their perspectives in wood science. Chapters are a valuable means of professional development, and of fostering lifelong members of the society. Student Chapters can be activated by any SWST member and can be hosted, upon approval of the

Executive Board, by any institution of higher education worldwide.

The main goal of SWST Student Chapters is to organize activities focused on wood science and technology, including seminars, experimental activities, site visits, and discussions with professionals and others. In general terms, through interactions among students, advisors, and industry, the chapter is an interesting educational method that in the last decade has become considerably more oriented toward practical experiences, practice of soft skills, and a learning-by-doing approach (Wachenheim 2007).

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SWST is aspiring to extend the number of Student Chapters. Of note, constituting and running SWST Student Chapters is free of charge. Currently, three are active, at the Department of Wood Science and Engineering, Oregon State University (OSU), at the Department of Sustainable Bioproducts, Mississippi State University (MSU), and at the Department of Agricultural, Forest and Food Sciences (DISAFA), University of Torino, Italy. Although SWST has a constitution and bylaws that should be followed by the chapters, each chapter has the opportunity to customize and adapt the activities accordingly to its needs.

Because students represent the future of both the field of wood science and the society, we as faculty advisors of existing chapters would like to share our experience in advising SWST Student Chapters, and encourage other wood science programs to reopen or activate their Student Chapter. In this view, we intend to: 1) share the know-how on constituting and running SWST Student Chapters, and 2) discuss the opportunities inherent in operation of Student Chapters.

HOW TO CONSTITUTE AN SWST STUDENT CHAPTER

The process of constituting a Student Chapter is presented as follows, based on the SWST Constitution and Bylaws and on the experience gained by running chapters. The constitution process can be divided into five steps, followed by an annual organizational step (Fig 1).

After the initial idea, the proponent should 1) preliminarily define the characteristics of the proposed Student Chapter. Vision, mission, available facilities, eventual funding, etc. can be considered in this phase. Constitutions of existing Student Chapters are available on the SWST website and can be consulted for framing this initial design. Once the main outline is defined, checking 2) with SWST, hosting institution, students, and students' associations can be recommended. This enables the assessment of the overall feasibility and to refine the elements to be included in the Constitution. Afterward, the most straightforward way to draft the Constitution 3) consists of downloading the Constitutions of Student Chapters active to date and taking them as a model. The proponent can modify or integrate the Constitution according to the specific needs of the proposed Student Chapter; SWST Bylaws on Student Chapters on the SWST website can also be consulted (<https://www.swst.org/wp/education/student-chapters/> [10 Mar 2022]). Next, the Constitution and the Faculty advisor must be approved 4) both by the hosting institution and by the SWST executive board. Exchange of official attestations of approval finalizes formation of the Student Chapter. Once the Student Chapter is active, a kick-off meeting 5) can be held. In this occasion, Student officers are nominated and the overall setting is shared with participating students. From then on, an annual organizational meeting 6) shall be organized to nominate new officers, to review the past year and to set goals for the new one.

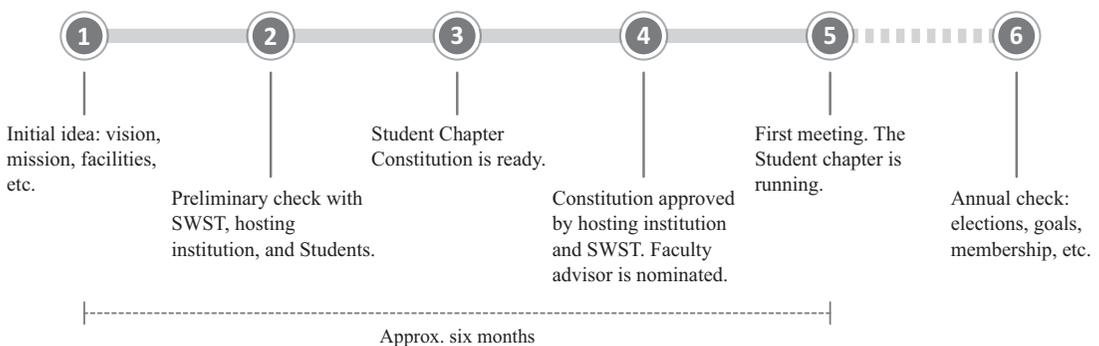


Figure 1. Outline of the constitution process of a SWST Student Chapter.

INSIGHT INTO SWST STUDENT CHAPTERS

SWST Student Chapters are intended as flexible organizations that can be set according to the specific needs of the context in which they operate. Relations with existing student associations should be managed to collaborate and to differentiate the initiatives.

Within the broad range of possible set-ups, the main considerations regarding students, faculty advisors, and institutions are presented in the following.

Students

Enrollment in Student Chapters is free of charge and can be a way for students to obtain SWST membership (see Membership in Table 1). A structured chapter can benefit undergraduate and graduate students by facilitating the organization of seminars, external visits, networking with professionals, lab/experimental activities, and team building. Chapters can ease contacts with associations and students from other sectors, like engineering, and with industries, from which internships or job opportunities can arise. Overall, chapter activities represent an alternative learning pathway, beyond formal teaching in the classroom, where students can embrace new information in an informal setting without exams, homework, etc. In addition, students have the opportunity to develop organizational and leadership skills via serving as an officer of the chapter.

Faculty Advisors

Depending on the interests of the faculty advisor, the chapter can provide an opportunity to test innovative teaching, fine tune research presentations, and build a strong service element into their CV. Although the role can be demanding, there are no specified time investments. Depending on the support given by the home institution, the faculty advisor may need to be especially in tune with issues around insurance coverage, liability, etc. Of course, an active Student Chapter can help with student

recruiting, benefiting the home department, and indirectly the advisor.

Institutions

By hosting a Student Chapter, institutions acquire a valuable means of promoting practical experiences and innovative education. In addition, they increase their networking opportunities at national and international levels, and also enhance their image as international bodies. The activity of the chapter can also help in recruiting new students and in achieving higher student retention.

Table 1 provides examples of activities commonly realized by active Student Chapters. Activities can be a single event (a meeting, a seminar) or extended over time (ie the design and realization of a wooden object), and can be proposed both by the faculty advisor and by students. Goals can be directly related to wood science and technology, such as in the case of an experimental activity, or to the development of transferable skills, ie practicing English language or acquiring organizational competencies.

CONCLUSIONS

Teaching methods considerably evolved in the last decade, aiming at increased interaction, inspiring learning, innovative experiences, etc. SWST Student Chapters offer a valuable opportunity to broaden student perspectives in wood science and technology by providing a dynamic environment that favors practical experiences, team building, networking, international perspectives, etc. Actually, experience has shown that Student Chapters not only have positive impacts on students by broadening their network with professionals and promoting leadership and team-building skills, but also, they are beneficial to faculty advisors and involved institutions.

The main factors that lead to having a successful Student Chapter are the amount of time spent by advisors and students, providing high quality activities and meetings, fostering networking opportunities, and educating students to

Table 1. Example of activities realized in the past years, or already scheduled, by existing Student Chapters.

Activity	Overview	Goal	Challenge	Suggestion
Mill visits/site visits/ visit at fairs	Visit to facilities and sites, even multiple day long, combined with parallel recreational activities such as hiking and camping.	Build a team-oriented organization.	Find activities that will be interesting to all students. Eg a sawmill visit can be not attractive to students that do not want to work or do research related to this area.	Educate and motivate students to go beyond their field and show how these experiences will enrich their views.
Development of a wooden item	Guided by the faculty advisor, students design a wooden object, and realize it using the facilities of the institution.	Learning the development process (Technology Readiness Levels); practical working of wood.	The activity can be time-consuming; logistics has to be scheduled.	The activity should have a well-defined time window. Multiple units of the item should be realized so that each student can take one after the activity. The activity can also be structured as a contest.
Volunteering	Collaboration in volunteering activities that are somehow related to the curricular disciplines.	Volunteering per se; testing one's skills and learning transferable competences.	Technical aspects have to be managed, eg drafting of a formal agreement with the volunteering association.	Adequate scheduling is needed. A reference person of the volunteering association should be clearly identified.
Making of a scientific article	A scientific article authored by the speaker is presented, both to discuss the content and to show its "making of."	Deepening into a specific argument at scientific level, and introducing the research environment.	Topics and methods can be complex, especially for students enrolled in first years.	Forward the article in advance; keep the overview simple.
Book review	Parts of a book are read and discussed.	Activate the students' interest toward specific themes.	Parts to be read have to be selected to give a suitable overview of the book.	The author can be invited, in person or online, to present her/his work. The book should be made available in the institution's library.
Seminars	Seminars are held by the faculty advisor or by academics and professional.	Deepening specific topics in wood science. If the presentation is held in English, students can test their listening.	Topics and methods can be complex, especially for students enrolled in first years of course.	Keep the overview simple; double-check in advance with the speaker.

(continued)

Table 1. Example of activities realized in the past years, or already scheduled, by existing Student Chapters. (cont.)

Activity	Overview	Goal	Challenge	Suggestion
Thesis presentations	Students practice their Bachelor's or Master's degree presentation in front of their colleagues, prior to the final discussion; the faculty advisor comments on it.	See specific topics; candidates have the opportunity to practice their discussion in a realistic environment; students see how to work on a presentation.	Ensure that the candidate's presentation is clear; fine-tuning of the presentation can result flat.	Set the meeting just before the discussion, so that the candidate is adequately prepared; keep the fine-tuning short; just to show how the process works; encourage students to ask questions.
Organizational meeting	Once a month during spring and fall semester the Student Chapter receives a guest speaker, from industry, research institutions, and other guests.	Interaction with experienced professionals from industries, professional associations, research agencies/institutions, and others.	Maintain student engagement to the end of each term.	Schedule a day/time that fits guests' availability and that most students can attend. Meals are provided.
Membership	The chapter pays the SWST membership for students that attend at least three meetings per semester and collaborate on at least one activity.	To measure attendance and record of which students will earn the membership.	Keep students engaged to meetings after they meet the criteria to earn the membership.	Attendance is taken at the end of every meeting using an app with questions from the presentation given at the meeting. This promotes interaction between students and keeps their attention.
Financing	There is a cost involved in paying SWST memberships (see above row) and meals provided during the meetings, and any other activities that the students decide to pursue.	Pay for expenses related to SWST memberships, meals, and other activities.	Ensure that all students participate.	Fundraisings, sponsorships and services to the department. For example, MSU department needed wooden boxes for the wood anatomy collection, and the chapter received money to fabricate them.
Others	The students may come up with extra activities or clubs derived from the chapter.	Promote a deeper interaction between students outside the student's chapter.	Activate the students' interest toward specific themes.	MSU Chapter has created a "wood club" where students come together in mini-projects to learn practical work in the woodshop.

understand the value of participating in the activities promoted by the chapter. The main benefits of serving as a faculty advisor are: 1) satisfaction derived from mentoring and developing new professionals (students); 2) opportunities for the advisor to interact with stakeholders, creating opportunities for future academia-industry collaboration; and 3) contribution to tenure and promotion, as advising chapters can be listed as teaching and/or service. Being a faculty advisor does consume time, but the benefits overflow its downside. We strongly encourage other wood science programs to reopen or activate their Student Chapter.

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