# CAREER CHOICE: AN ANALYSIS OF THE FACTORS OF WOOD TECHNICS STUDENTS AT HARTFORD UNION HIGH SCHOOL

by

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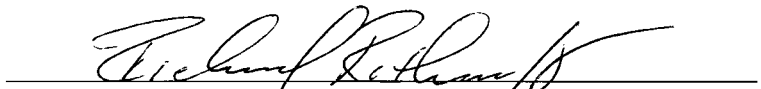

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ABSTRACT

This study investigates career choice factors of Wood Technics students at Hartford Union High School. Research specific to vocational education, career opportunities available, the forecast of wood industry trends, and perceptions of the industry demonstrate a variety of opinions of why a student would or would not choose a career in the wood products industry. Through the use of a survey to collect data, students involved in the Wood Technics program expressed positive beliefs involving choosing a career in the wood products industry which were unlike the typical trends shown to be occurring in other research. Seventy one percent of respondents indicated they intend to have a career in the wood products industry. After analyzing all the data, this researcher determines the current curriculum is beneficial in helping students make informed career decisions related to the wood products industry.

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# Chapter 1 – Introduction to the Study

One of today's educational trends is encouraging all students to enroll into a traditional four year university program. "The problem is that only 20% of all work is professional; thus, the odds of landing such a job is fair to poor, but the obsession often makes teens unwilling to consider alternatives" (Gray, 2000, p. 49). This said, high school students who intend on attending a college program need to research and determine the demand for their skill upon college graduation. Many college programs educate students in topics and skills which are not in demand. Thus, creating a surplus of employees with limited employment opportunities in their field. An alternative to a degree in the professional arena is a degree from a vocational college. Whether the program involves one, two or four years, there are many students in today's high schools who would thrive when given the opportunity to work with their hands. If these students, in particular, are made aware of and encouraged to join in this lucrative market, then job placement and overall success may be more profound. Gray also stated, "One little-known gem among 4-year college majors is a bachelor's degree in technology. Unlike engineering degrees, these programs are typically more applied and more specific. Whereas engineering degrees are bookish, technology degrees are hands-on" (p. 87). This potential education path may better fit students not willing or able to complete math or science requirements of an engineering degree. Here to, students should be cognizant of the career opportunities and industry demands for graduates of the program in order to maximize potential of employment.

One community with a student population positively affected by the vocational career market is Hartford, Wisconsin. With approximately 10,000 residents, Hartford is known for its successful industry employment that forms the community. In a recent *Milwaukee Journal Sentinel* article titled City Finds Strength in Manufacturing, the writer stated that "Total

manufacturing jobs in Hartford increased to 4,933 in 2004 from 4,573 in 2000. That's 60% of the area's jobs and almost double the 1993 total" (Torinus, 2005, p. 4D). Companies such as Steel Craft Inc., Helgesen Industries, Snow Way Inc, Broan Manufacturing, and Hartford Finishing provide employment opportunities requiring educational backgrounds from both ends of the spectrum. In the local wood industry, there are many job opportunities within a 25 mile radius. These companies include Wood Specialties, CJ Schwarz and Company, Lannon Millwork, Riebau's Custom Cabinets, Merton's Custom Cabinets, J & V Lakewood Cabinets, and Studio Designs. Students in the Hartford community are presented with numerous vocational opportunities when they leave high school. "As of 2001 there were 2004 apprenticeship programs offered through the Wisconsin Technical College System with over 7100 people participating in apprentice training programs. Currently, Moraine Park Technical College has over 500 people participating in its apprenticeship program" (HUHS Counseling Department, 2004, p. 2).

As a comprehensive high school, Hartford Union High School (HUHS) is committed to providing courses for every type of student. According to Hartford Village Profile, 2005:

> More than 1,600 students are enrolled in Hartford Union High School. They choose from some 220 different courses, including 20 honors courses and advanced placement courses in art history, advanced psychology, U.S. history, micro/macro economics, computer science, calculus, and critical response to literature. Reflecting the agricultural area that surrounds Hartford, the high school teaches 16 different agribusiness courses. There is also emphasis on technology, preparing students for entry level employment in numerous fields or continued education at a technical college. Several technical courses earn

> college credit, thanks to agreements between the high school and three area technical colleges. (2005, p. 1)

Students can choose a career path early in their high school years and discover whether it is a career for their future. According to the HUHS Report to the District's Communities, the Post High School Intentions of the Class of 2003 were as follows: 50% planned to attend a 4 year college; 25% intended to get a two year degree; 20% went directly into the workforce; 3% went into the military; and 2% went on to apprenticeships (2004, p. 4). The HUHS website stated, "Our students consistently achieve ACT composite scores above the state averages and our programs are designed to meet the needs of all students regardless of their post high school plans (2006, p. 1).

> The mission of HUHS Technology Education Department asserts:
>
> Technology Education is the study of the way people apply knowledge and scientific principles in the use of various tools and materials to solve problems and meet human needs. It is our mission with supportive businesses and industries to prepare all students to adapt and function in an ever-changing technological society, develop employability skills and provide the transition from school to ultimate gainful employment. (HUHS Website, 2006, p. 1)

According to the Technology Education Department's report to the School Board, there are 26 different courses offered within the Technology Education Department, eight different types of internships, and technical college credit given for advanced courses (2005). The Wood Technics program progresses students through a series of courses, beginning with Millwork I and Millwork II, and then on to Mass Production and Cabinet Making. In all courses, there is an emphasis on utilizing modern production, materials and techniques with a hands-on approach.

Custom Cabinet students will focus on custom cabinetry specifically for the HUHS VISION house in an attempt to develop proficiency in the cabinet shop. There is an overall effort to create awareness of the industry and possible future employment opportunities. For example, students in Mass Production develop contacts with the local wood products industry leaders. Within these four courses, students operate equipment currently used within the industry. "With only 50 percent of its students going onto college the other 50 percent entering the workplace or going on to technical school, Hartford has succeeded in bringing its wood technology education into the new century as well" (Phillips, 2002, p. 74).

A recent Hartford graduate entered the Wood Technics program as a freshman and continued to reap its benefits throughout his high school career. By the time he was a senior, not only was he taking part in an internship with a nearby cabinetry shop, but he was also invited to participate in the furniture design competition of the Association for Woodworking and Furnishings Suppliers (AWFS ) trade show in Las Vegas. The mission-style dresser, which he created for the competition, won the Honorable Mention award. This student was among the most elite in his class; he possessed both the advanced skills and motivation fundamental to being one of the best in the field. However, a year out of high school he is employed locally as a rough carpenter. This is just one instance of a student excelling in the program, but ultimately not choosing a career path in the wood products industry.

*Statement of the Problem*

HUHS has made many changes within the Technology Education department, including additional lab areas, increase in staff, and updating equipment and curriculum. More specifically the Wood Technics program has benefited from these same improvements in an effort to increase

the students' awareness of the wood products industry. Graduates with a strong background in Wood Technics at HUHS are not choosing a career in the wood products industry.

*Purpose of the Study*

Several levels of classes are offered at HUHS in the Wood Technics program in an effort to expose students to industry elements and allow them to participate in activities of their interest. The purpose of this study is to determine the primary factors influencing career choice of 2006 Hartford Union High School Wood Technics students. Identification of factors achieved through a survey conducted in the spring of 2006 will assist the instructors in the realignment of curriculum to meet the needs of students in order to make an educated career choice.

*Research Questions*

The questions for this research were the following:

1) How well are students in the Wood Products Manufacturing course presented with opportunities for careers in the wood products industry?

2) What are the perceptions of students toward the wood products industry after participating in the Wood Products Manufacturing course?

3) What reasons do students give for not choosing a career goal in the wood products industry?

4) What activities in the Wood Technics curriculum influenced students' career decisions?

*Significance of the Study*

The significance of the study follows:

1) Students in the Wood Technics program are exposed to a variety of aspects included in the wood industry. Although these students show interest and pride in their studies, they are still

reluctant to pursue a career within the industry. This study will help determine the factors and current process of career selection by students enrolled in the Wood Technics program.

2) Since there is a lack of information available to the wood industry concerning the employment of their workforce, this study will provide a specific case study of students involved in the Wood Products Manufacturing and Internship courses. From this research, organizations such as WoodLINKS will be able to use the information in promoting wood products career to high school students.

3) Counselors can use the information in this study when assisting students in making career selections. This is especially true when advising students who are considering a technical career.

4) Findings from this study may be applicable to other areas of career and technical education at HUHS, or for other schools with similar programs.

*Limitations of the Study*

The limitations of the study are that:

1) Not all students replied to the study given by the researcher; therefore, limiting the validity of the response. Even when they responded to the survey, there was a chance that the students were not candid with their opinions. As well, the survey had face validity only and was developed by researcher.

2) The study was limited to the students in one rural Southeastern Wisconsin High School. Additionally, the study was built to include and was restricted to the participants from one specific course given at the school. At the time of the study, all students involved in the program were male. Therefore, the study's findings may not be readily generalized to female students.

3) The definition of "wood industry" is broad and varies among individuals in the field. Therefore, it prevents the outcomes of this study to be generalized to each area of the wood industry.

*Definition of Terms*

The following terms are found in this study and are defined as:

Association for Woodworking and Furnishing Suppliers: AWFS® is a trade association with an international, corporate membership that includes manufacturers and distributors of machinery, hardware, lumber, upholstery materials, bedding components, wood products, and other supplies to furnishings and wood products manufacturers. From its headquarters in Southern California, AWFS® works closely with other industry associations on issues of mutual concern (AWFS Website, 2006).

Custom Cabinet Internship: Custom Cabinetmaking Internship is part of the work-study program. Students with proper pre-requisites may be employed in one of the local custom cabinet facilities for an average of 15 hours per week at minimum wage or above. The student is expected to remain with the employer the entire school year. Student will be evaluated by both the school and the work supervisor (HUHS Website, 2006).

Manufacturing: The production of finished goods from raw materials, especially on a large industrial scale (Microsoft encarta college dictionary, 2001).

Rough Carpenter: One who constructs the rough framing of a structure using nominal lumber, sheet materials, and engineered components. Frequently referred to as working on residential buildings such as a house or garage and involving the construction of floor, wall, and roof systems.

Technics: The science or rule of a particular field of knowledge, especially a technical one. (Microsoft encarta college dictionary – 2001)

VISION House: Carpentry/VISION is a hands-on experience for students who are interested in employment in the construction trades. A partnership between the Hartford Rotary, the Hartford Chamber of Commerce, and Hartford Union High School provides the opportunity for students to participate in the construction of a single-family residence. Enrollment is limited. Acceptance into the program will be by application and interview. This is a leading school-to-work project in the state (HUHS Website, 2006).

Vocational: Relating to education designed to provide the necessary skills for a particular job or career (Microsoft encarta college dictionary, 2001).

Vocational School: A secondary school in which students are trained in a trade or skill to be pursued as a career (Microsoft encarta college dictionary, 2001).

Wood Products Industry: Southeastern Wisconsin business associated with the production and sale of cabinetry, furniture, moldings, stairs, windows, doors, and flooring.

WoodLINKS: A program that certifies students to a National Industry standard for the wood industry. The theory behind WoodLINKS is that the wood industry and a public education system – a high school or a technical school – work together to deliver a wood manufacturing education program that meets the direct – entry skilled worker needs of a local wood industry profile (WoodLINKS 2005).

# Chapter 2 – Literature Review

This chapter will include a discussion of the positive and negative aspects of vocation education followed by programs created within the wood industry to educate teachers and students. In addition, this study will identify potential career opportunities within the wood industry, provide a forecast of the wood industry trends, and perceptions of wood industry careers. This chapter will conclude with data of high school students choosing a career path.

## *Positive Aspects*

There are many philosophies about the value of a vocational education. Some find vocational training to be rewarding. "Students have said that the key selling points were: small class sizes, scholarship opportunities, internships, co-op positions, and employment opportunities" (Schmidt, 1998, p. 2). In a community such as Hartford, a vocational education would be beneficial considering the booming manufacturing market, "The city of Hartford's industrial and manufacturing community is continuing to grow as other parts of the state lag behind in job creation and development" (Hermann, 2006, p. A6). Students in this community can find job success with alternative vocational career paths.

## *Negative Aspects*

On the other hand, some view vocational education as a risky career choice. "Vocational education focuses too much on narrow job training. It is out of step with changes in industry. It prepares young people for occupations without regard to labor-market demands. It lacks intellectual content and academic rigor" (Olson, 1997, p. 42). This negative viewpoint may be affecting the career choice of many who would normally be part of the industry. "Currently, a major cause for concern for the forest products industry in North America is a lack of personnel trained in wood science and technology. Annually, there are more positions available than

graduating students" (Schmidt, 1998, p. 12). As a world market, a career in the wood industry may lack the promise of other careers, however, in Hartford Wisconsin, there are opportunities around every corner.

*Wood Industry Programs*

Individually, students need to decide the value of the positive and negative aspects of vocational education. If a student believes that a positive outcome can be attained through courses at a technical college along with on-the-job training, an outline for success can be developed. Duane Griffiths, a manager for Stiles Machinery stated, "What a lot of experts are indicating is that wood working companies that are being proactive in this matter are saying to themselves, 'I need to find today the people that I'm going to need in seven years' (cited in Crissey, 2003, p. 33). Therefore, outside of training completed within a high school technical program, the industry needs to play a more significant role in shaping the employees of tomorrow. Programs like WoodLINKS, Wood is Good, and Fox Valley Technical College's Summer Camp focus on the wood products industry. Such programs have been established for teachers and students to encourage understanding of how the industry functions and, consequently, promoting a vocational career rather than following a potentially unsatisfying four year college path.

WoodLINKS, a national industry educational program, provides students with the opportunity to explore the industry and all it has to offer. WoodLINKS creates a relationship between the employers in the wood industry and the wood technics programs at the nearby high school. According to WoodLINKS president Larry Hilchie, "We need to attract a continuous stream of the best and brightest students to our industry. We will accomplish this by involving students and teaching them about the exciting technology and diverse career opportunities for

every level" (1999, p. 14). There is a direct correlation between providing a certain amount of information and experiences with regard to the technical industry and making an informed career choice. "For this reason, the Forest Products Department at the University of Idaho developed a course to provide teachers with facts about wood and the wood products industry that were not available through other teacher education programs, courses, or workshops" (Johnson, Campbell, Wagner, & Gorman, 1996, p. 27). Overall, the program philosophy revolves around employers from the industry communicating effectively with teachers, who in turn influence student decision making.

*Career Opportunities and Trends*

Students can make wise career decisions if they are familiar with characteristics of the business they wish to enter. "From wood comes lumber, millwork, and manufactured wood products… All wood species are brought to market as lumber through a sequence of steps. These include harvesting, sawing, drying, and grading. Individuals or industries then order lumber and millwork to meet their needs" (Umstattd, 1996, p. 103). Additionally, the processing of wood products creates employment. The US Department of Labor reported that "All wood workers are employed at some stage of the process through which logs of wood are transformed into finished products. Some of these workers produce the structural elements of buildings; others mill hardwood and softwood lumber; still others assemble finished wood products" (2006-2007, p. 1).

Despite the need for woodworkers in numerous areas of the industry:

> Overall employment of woodworkers is expected to decline through 2014…Firms will need woodworkers with technical skills to operate their increasingly advanced

> computerized machinery .... competition should be mild, and opportunities should be best for woodworkers who, through vocational education or experience, develop highly specialized woodworking skills or knowledge of CNC machine tool operation. (US Department of Labor, 2006-2007, p. 4)

With these predictions known, employers are taking a different approach to finding employees. Many employers within the wood products industry now prefer an employee who is specialized in the trade over one who just has good work-ethics. "What we do now is hire people who have experience..." (Ohm, 2006, p.70).

*Industry Perceptions*

A qualified workforce is a challenge facing the wood industry. According to Robert Lozon, owner of Precision Die and Machine Co., "... parents read about manufacturing jobs going to China and don't want their kids training for a job that might disappear" (cited in Schut, 2004, p. 96). Additionally, in a thesis by Michael Borchert, the President of KLH Industries in Germantown believed, "... that students are not being told on an equal basis, by career counselors, the success stories of those in the trade at present; compared to those that pursued a traditional four year college profession" (Borchert, 2002, p. 15). A stigma exists that a job in the wood industry will not provide job security.

Future employees' delayed awareness of the specific skills required causes problems for companies looking for qualified, entry-level employees. After interviewing three experts in the wood industry, there is a strong correlation between career choice and the industry. Steve Ehle, the Editor-in-Chief of Woods Digest and Woods Digest Finishing magazines, commented, "With such a serious shortage of skilled entry level people entering the wood industry – particularly the secondary sector – it is crucial that we prepare as many young people as possible for a

woodworking career" (personal communication, January 26, 2006). During an interview with Wilf Torunski, National Program Director for WoodLINKS USA, he stated, "Professional education administrators have got to realize that the USA has a major problem that is related to industry competitiveness and directly related to the lack of skilled graduates at all levels of education" (personal communication, January 26, 2006). Torunski also reported that many students do not choose the wood industry as a profession until later in their careers; however, "... it is easier to assess where you are and where you want to be – or need to go – when your life is not in major turmoil" (cited in Whitacre, 2005, p. 86). Mike Flamer of the Dorfman Group believed if you stay in the same profession for more than seven years, then your views and skills become inflexible (cited in McCoy, 2004, p. 42). It seems as though the research suggest that the most opportune time for students to determine and pursue career goals is fresh out of high school.

*Career Path Data*

Career choice is not always a priority for high school students. For more than a decade, both new and experienced educators have been conscientious of students making poor personal career choices, postponing, and potentially limiting their career successes. "There are about 1,200 two-year and 2,200 four-year colleges in the United States, and the vast majority admits almost everybody who applies. But 50% of students at four-year colleges and universities quit without ever graduating..." (Unger, 1992, p. 3). Gray agreed with this research when he indicated that, "...69% [of high school students] go directly to college; 72% enroll within 2 years of graduation, two thirds of whom enroll in 4-year colleges, but 30% or more must take remedial education, ... one in two goes underemployed" (2000, p. 14). These statistics are staggering and discouraging for those students who wish to be college bound. If more high school students were

made aware of this data and the emphasis was made on a sensible career choice verse the typical route, there may not be such a dramatic problem.

# Chapter 3 – Methodology

The methods and procedures used in this study of Career Choice: An Analysis Of The Factors Of Wood Technics Students At Hartford Union High School (HUHS) are explained in this chapter under the headings of 1) method of study, 2) subject selection and description, 3) instrumentation, 4) data collection, 5) data analysis, and 6) limitations.

## *Method of Study*

After years of instructing in a high school environment, the researcher observed a lack of students who were prepared to make a career choice. In turn, the researcher contacted professionals connected to the wood industry to verify these observations. The information collected encouraged the researcher to investigate the issue further. Publications, including career choice of high school students and the future career opportunities inside the wood industry, were sources of written documentation showing that this issue was valid. Therefore, the researcher explored the topic by searching through thesis papers by other educators. At this point interest was created and verified through literature reviews.

There were numerous studies connected to this topic demonstrating a need for further study. After examining these studies, it was realized that a student survey was a common evaluation tool. Concluding that a survey for students enrolled in the Wood Technics program at HUHS would be an appropriate mode of instrumentation in this study. The study was given in a confidential fashion and information was related to factors of career choice. The estimated time to complete the survey was 10 to 20 minutes.

## *Subject Selection and Description*

The subjects selected in this study were high school sophomores, juniors, and seniors participating in the Wood Technics program of 2006 at HUHS. At the time of the study, total

student enrollment at HUHS was 1735. Students attending HUHS came from diverse educational backgrounds including several rural K-8 schools and one 6-8 Middle school. The Technology Education (Tech Ed) program at HUHS was one of the largest in Wisconsin with 11 full-time staff members teaching a total of 1841 student sections. This implies that many students are enrolled in more than one Tech Ed class per semester. Also at the time of the study, the students enrolled n the Wood Technics class surveyed was comprised of 100% Caucasian male students.

*Instrumentation*

A survey was developed by the investigator as an instrumentation device for this study. No measures of validity were done on the instrument due to the intended use. The study was approved by the HUHS District Administrator and UW-Stout Institutional Review Board (IRB) prior to dispersement. Prospective subjects were asked to participate and were given consent forms to notify and obtain permission from the students' guardian. The survey contained statements and questions totaling 15 answers using a modified Likert scale and ordinal ranking. Written directions were clearly and simply stated proceeding any items on the survey, making it easy to understand for the subjects. The survey was distributed to students during class at which point they provided the written consent form to the investigator and were again reminded this survey was strictly voluntary. Sufficient time was given to subjects to return surveys to the investigator.

*Data collection*

Permission from the HUHS District Administrator, Mr. Jeff Tortomasi, and the UW-Stout IRB was acquired prior to dispersing the survey. Surveys were disseminated to, and collected from students within the week of May 8, 2006. Prospective subjects were asked to participate by the investigator and were given consent forms to notify and obtain permission

from the subjects' guardian as required by the UW-Stout IRB. Only the surveys which were returned, along with the written consent form were included in this study. Surveys were completed as instructed.

*Data analysis*

All appropriate descriptive statistics were conducted on the data collected. For the purpose of this study, subjects provided ordinal data. Measures of central tendency which apply to ordinal data are mode and median. The measure of dispersion used in this study was range of scores. The surveys were collected and responses tabulated to use for statistical calculations.

*Limitations*

Validity of the survey is only at face value as the investigator created the survey specifically for this study. Due to the sampling process chosen by the investigator, there are limited data calculations which can be performed. Ordinal data was collected from a limited amount of male students. Due to the scale of this study, findings can not be generalized to all high school students.

# Chapter 4 – Results and Discussion

*Introduction*

This chapter will provide data gathered from the survey, which was distributed by the investigator. The instrument (see Appendix A) was created by the investigator for this specific study and distributed to 24 students enrolled in the Wood Manufacturing class in the 2006 Wood Technics program at Hartford Union High School (HUHS). No questions on the survey were used to identify the demographics of the respondents as all participants of the study were Caucasian males, ages 16 to 18. There were 21 total respondents to this survey, or 87.5% of the total surveys distributed. The majority of the instrument's questions used a Likert scale of 1 to 4 to determine student value of the question. Every question was answered by the respondents.

In order to sort and compile the results, the investigator created a spreadsheet for each question on the survey (see Appendix B). Each survey was randomly numbered on the collection date. This number and responses were recorded to be used not only as an organizational tool for analysis but also as a cross reference of answers to similar types of questions. All responses were categorized to answer specific research questions.

The first section of this chapter will discuss the results of the survey that relate to career opportunities and perceptions of the wood products industry. This data also directly correlates to the first two research questions outlined in Chapter 1:

1) How well are students in the Wood Products Manufacturing course presented with opportunities for careers in the wood products industry?

2) What are the students' perceptions of the wood products industry after participating in the Wood Products Manufacturing course?

*Opportunities and Perceptions*

When asked if career opportunities were presented throughout the Wood Technics program, approximately 95% of participants indicated opportunities were presented within the program; 80% of whom agreed strongly that they were presented with such information.

Table 1

*Career opportunities in the Wood Industry were presented throughout the Wood Technics Program*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 1 |
| 3 (Agree) | 4 |
| 4 (Strongly Agree) | 16 |

Survey question number 2 had students indicate whether they believed if there were employment opportunities available at their skill level (see Table 2). Again 95% of participants indicated there was the potential for them to find a job in the wood products industry.

Table 2

*There are potential jobs for me in the Wood Products Industry*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 1 |
| 3 (Agree) | 8 |
| 4 (Strongly Agree) | 12 |

Responses to question three indicated 29% of the participants agreed that jobs in the wood products industry are hard to find. Four of the 21 participants strongly disagreed when asked if jobs in this area were hard to find.

Table 3

*Careers in the Wood Products Industry are hard to find*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 4 |
| 2 (Disagree) | 12 |
| 3 (Agree) | 5 |
| 4 (Strongly Agree) | 0 |

The fourth survey question involved students' perception of the wood products industry. Nearly all respondents indicated a positive perception of the work environment. Forty two percent of participants answered with "strongly disagree," when asked if the wood products industry was dull and dirty (see Table 4).

Table 4

*Careers in the Wood Products Industry are dull and dirty*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 9 |
| 2 (Disagree) | 11 |
| 3 (Agree) | 1 |
| 4 (Strongly Agree) | 0 |

Participants were asked about their perception of the Wood Technics program at HUHS. A positive learning experience was reported by 100% of the participants (see Table 5).

Table 5

*In all, the Wood Technics Program was a positive learning experience*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 0 |
| 3 (Agree) | 6 |
| 4 (Strongly Agree) | 15 |

The second section of this chapter will provide data pertaining to career choice factors of students participating in the Wood Technics program at HUHS. Research questions 3 and 4 will be addressed in this section.

3) What reasons do students give for not choosing a career goal in the wood products industry?

4) What activities in the Wood Technics curriculum influenced students' career decisions?

*Preparation and Decisions*

Employability skills for the wood products industry were addressed in question 6. Only 1 of the 21 participants indicated their belief in having inadequate skills for employment in this field. Many of the skills in this program and industry are linked to the ability to operate industry specific equipment (question 7 on the survey). The one student who expressed his belief in having inadequate skill preparation for industry also was uncomfortable in setting up basic equipment. Similar results were found in the responses to questions 6 and 7. Regarding employability skills and the ability to successfully operate equipment, 95% of the respondents answered positively.

Table 6

*I have adequate skills for employment in the Wood Industry*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 1 |
| 3 (Agree) | 10 |
| 4 (Strongly Agree) | 10 |

Table 7

*I feel comfortable setting up and operating basic equipment*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 1 |
| 3 (Agree) | 4 |
| 4 (Strongly Agree) | 16 |

Questions 8 and 9 (see Tables 8 and 9) address student beliefs of activities within the Wood Technics program. Slightly more than 90% of the participants replied positively when asked about the influence of discussions and lab activities on their career choices. Two of the respondents indicated classroom discussions and lab activities will not help in making their career decision.

Table 8

*Classroom discussions / lectures will help me make a career decision*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 2 |
| 3 (Agree) | 10 |
| 4 (Strongly Agree) | 9 |

Table 9

*Lab activities / projects will help me make a career decision.*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 2 |
| 3 (Agree) | 10 |
| 4 (Strongly Agree) | 9 |

Industry tours and presentations are incorporated into the Wood Technics program in order to give students a chance to see firsthand what the industry entails. Nearly half of respondents strongly agreed that this activity helped them in their career decisions (see Table 10).

Table 10

*Industry tours / presentations will help me make a career decision*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 0 |
| 3 (Agree) | 12 |
| 4 (Strongly Agree) | 9 |

Questions 11 and 12 asked participants to indicate to what degree they believe parents and teachers influence their career choice. Over half of the responding participants indicated parents do influence their career choice. Nearly 62% percent of respondents indicated their belief that parents have some influence on their career decisions. The same number of participants indicated they believe that their teachers also influence their choice of careers (see Table 12).

Table 11

*My parents have influence on my career decision.*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 2 |
| 2 (Disagree) | 6 |
| 3 (Agree) | 10 |
| 4 (Strongly Agree) | 3 |

Table 12

*Teachers in other subject areas have influence on my career decision*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 3 |
| 2 (Disagree) | 5 |
| 3 (Agree) | 13 |
| 4 (Strongly Agree) | 0 |

Question 13 indicated 71% of respondents intend to work in the wood products industry. Of these, 25% strongly agreed that they intend to choose a career in the wood products industry (see table 13). Of the six respondents who indicated they do not intend to work in the wood products industry in the future, nearly all agreed teachers and parents have influence on their career choices. This data proves a correlation between career choice of students and the influence of parents and teachers (see Table 11, 12, 13).

Table 13

*I intend to work in the Wood Products Industry at some level*

| Responses to the Statement | Number of Respondents |
|---|---|
| 1 (Strongly Disagree) | 0 |
| 2 (Disagree) | 6 |
| 3 (Agree) | 10 |
| 4 (Strongly Agree) | 5 |

The third section of this chapter will discuss data gained from question 14 of the survey. Students were asked to rank which factors positively influenced their career choice. This data will be cross referenced with previous outcomes of the survey.

*Influencing Factors*

The final question of the instrument directed participants to rank which factors that they felt influence their career choice. Participants were asked to rank the top three factors from a list of eight which are commonly thought to influence student career choice. The following table shows the list of factors that participants were to rank (see Table 14).

Table 14

*Career Choice Factors*

| Letter Choice | Career Factor |
|---|---|
| A. | Salary |
| B. | Type of Work |
| C. | Personal Satisfaction |
| D. | Family Influence |
| E. | Location |
| F. | Job Security |
| G. | Opportunities for Employment |
| H. | Work Environment |

Data collected consisted of the top three factors believed to influence the career choice of the respondents. This data was tallied and referenced to the number of survey. The data was then inserted into a spread sheet in order to identify which factors each respondent believed to be the most important (see Table 15).

Table 15

*Ranked Career Choice Factors of Respondents*

| Survey Number | First Factor | Second Factor | Third Factor |
|---|---|---|---|
| 1 | C | A | B |
| 2 | H | A | E |
| 3 | C | B | G |
| 4 | H | F | E |
| 5 | B | A | F |
| 6 | C | E | A |
| 7 | E | F | A |
| 8 | C | A | E |
| 9 | B | C | A |
| 10 | C | F | A |
| 11 | B | C | H |
| 12 | C | B | H |
| 13 | H | A | B |
| 14 | H | A | B |
| 15 | H | A | E |
| 16 | B | A | E |
| 17 | B | C | F |
| 18 | B | E | A |
| 19 | C | F | A |
| 20 | B | E | A |
| 21 | C | H | A |

The majority of respondents indicated either B type of work or C personal satisfaction, as the first priority. The majority of the responses in the first priority category were either B or C totaling 71%. Choices E location and H work environment were also selected as first priorities but only totaled 9% of the first priority category. Surprisingly, choice A salary was not indicated by any participant as their number one influence. Although salary was the most frequently selected choice among top three factors with slightly over 25% of total responses. Of the respondents who selected salary for one of their factors the majority also selected H work environment as a higher priority factor. The second most popular answer was B type of work,

with 19 % of the total. Of the 12 responses for B 58% were selected as first most important. Location, E, was the next highest choice with 14% of the listed factors (See Table 16).

Table 16

*Totals of Ranked Career Choice Factors of Respondents*

| Career Factor | First Priority | Second Priority | Third Priority | Total |
|---|---|---|---|---|
| A | 0 | 8 | 8 | 16 |
| B | 7 | 2 | 3 | 12 |
| C | 8 | 3 | 0 | 11 |
| D | 0 | 0 | 0 | 0 |
| E | 1 | 3 | 5 | 9 |
| F | 0 | 4 | 2 | 6 |
| G | 0 | 0 | 1 | 1 |
| H | 5 | 1 | 2 | 8 |

Eight of the nine respondents that selected location as a factor also indicated they intended to work in the wood products industry at some level. Interestingly, none of the respondents chose family influence as one of the top three most important, but when asked if their parents influence their decision in question 11, nearly 62% said parents were a factor.

# Chapter 5 – Summary, Conclusions and Recommendations

## *Summary*

The purpose of this study is to determine the primary factors influencing the career choices of the 2006 Hartford Union High School Wood Technics students. The results of a survey conducted in the spring of 2006 will assist the instructors in the realignment of curriculum to meet the needs of students and help them to make educated career choices. In an attempt to prepare students for post-secondary training or employment in the manufacturing sector, several levels of classes are offered at HUHS in the Wood Technics program in an effort to expose students to industry elements and allow them to participate in activities of their interest.

Results of the study are summarized in this chapter and include a restatement of the problem, methods and procedures, major findings, conclusions, recommendations, and recommendations for further study.

## *Restatement of the Problem*

HUHS has made many changes within the Technology Education department; including additional lab areas, increase in staff, and updating equipment and curriculum. More specifically the Wood Technics program has benefited from these same improvements in an effort to increase the students' awareness of the wood products industry. However, graduates with a strong background in Wood Technics at HUHS are not choosing a career in the wood products industry.

## *Methods and Procedures*

It was determined by the investigator that a survey of students enrolled in the Wood Technics program at HUHS, would be an appropriate mode of instrumentation in this study. The survey was given in a confidential fashion and was related to factors of career choice and perceptions of the Wood Technics program. The estimated time to complete the survey was 10 to

20 minutes. This method allowed the researcher to identify which major activities within the program curriculum were influential to students in their process of choosing a career.

*Major Findings*

Completed surveys were collected and data was tallied. Data shows students in the wood products classes are making career choices while in high school. Students also indicated they were aware of potential career opportunities and felt there were jobs available to them. Unlike the general population, the perception of a dull and dirty environment was not indicated through the survey. When asked about their experience while in the Wood Technics program, respondents gave a very positive feedback on all three of the major activities of the program. According to the information gathered in the literature review, influence from parents and teachers play a large part as they decide on a post-secondary school path. The survey of this study provided data which showed evidence that students believe parents and teachers do not heavily influence their career choice with several of the students indicating little influence from parents and teachers. Contrary to the initial beliefs of the investigator, nearly three quarters of the respondents suggested they intend to find employment in the wood products industry at some level.

*Conclusions*

After further review of the collected data, the researcher confirms the current curriculum presented to students in the Wood Technics program does encourage career choice of participating high school students prior to graduation. Also, students are interested in the available careers in the wood products industry.

This project includes four research questions which will be addressed in this chapter. The questions were designed to analyze data relating to the Wood Technics program and the students

perceptions to activities and usefulness in choosing a career. These questions will be addressed with their related conclusions of the study.

Research question number one sought to gather data whether or not students believed they are presented with information in the HUHS Wood Technics program pertaining to making informed career choices for the wood products industry. Positive survey results make the researcher conclude students are adequately presented with career opportunities in the wood products industry. Contributing to this positive result are lab activities that connect students with the local industry. One of the most powerful activities was one that required students to tour an industry specific partnership. It provided students with an in-depth understanding of the opportunities available.

Research question two was designed to provide the investigator with data relating to students' perceptions of the wood products industry. According to the Department of Labor, the wood industry will have a decline in employment in the years to come. This decline in the amount of career opportunities will create an increased need for higher skilled labor. Employers and employees alike will need to focus on this higher skill and experience in order to remain competitive in the wood products market (US Department of Labor, 2006-2007, p.4). In the Wood Technics program students are able to gain some of this experience and knowledge in order to become a sought after employee. Respondents suggested a positive outlook of the industry as it is know locally. Respondents thought employment was obtainable and that working conditions in the industry were not dull and dirty. Additionally, there is a strong tie between the personal satisfaction of work and the positive working conditions within the wood products industry.

Research question three of the study was intended to provide information on the reasons why students in the Wood Technics program do not choose a career in the wood products industry. Of the respondents who indicated they were not going to work in the wood products industry, the only solid correlation was found in the positive influence of parents and teachers. Contrary to the initial belief of the researcher, the majority of respondents indicated positive intentions of finding employment in the wood products industry.

Research question 4 asked which activities within the Wood Technics program most influenced students' decision of a career in the wood products industry. Although not all respondents fully intend to pursue a career in the wood products industry, nearly all suggested the required activities had value when making their career choice.

*Recommendations*

After analyzing the data, this researcher has determined the current curriculum is beneficial in helping students make informed career decisions related to the wood products industry. The data proves the curriculum is also providing necessary technical instruction of the wood products industry. Recommendations to keep current lab activities and to continue industry tours for students are suggested from data collected. The researcher also recommends a strong effort be made to continue the updating of the HUHS Wood Technics facility and curriculum in order to keep current technology available to students interested in a career path which involves the wood products industry. Over 90% of the respondents replied positively to the activities within the program and their ability to choose a career path prior to high school graduation. Nearly three quarters of respondents also indicated they intended to work within the wood products industry.

After reviewing the literature and survey data, it is recommended that a method be developed to increase parental awareness of the potential career opportunities in the wood products industry for their son/daughter.

*Recommendations for Further Study*

Recommendations of further study from the researcher are as follows. Similar studies to be carried out with other upper level classes at HUHS to determine student perception of career opportunities in alternative industries. These same studies may also include data to determine if there is any definable trend among students to make career decisions prior to high school graduation as they complete other upper level classes within the Technology Education department.

Data can also be collected from other school districts to determine the usefulness of multi-tiered courses in relation to students' ability to make a career choice prior to high school graduation in their local industries.

A follow-up survey of HUHS Wood Technics graduates is another possibility. A survey could be conducted as a means to gather data as to what type of career paths these students are taking. A study which focuses on past Wood Technics students may provide data proving a correlation between the Wood Technics program and students who make career path decisions prior to high school graduation.

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# Appendix A: Survey

**Career Choice: An Analysis of the Factors of Wood Technics Students at Hartford Union High School**

**Instructions:** Please complete the following survey using the scale below.

**1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree**

| | | SD | D | A | SA |
|---|---|---|---|---|---|
| 1. | Career opportunities in the Wood Industry were presented throughout the Wood Technics Program. | 1 | 2 | 3 | 4 |
| 2. | There are potential jobs for me in the Wood Products Industry. | 1 | 2 | 3 | 4 |
| 3. | Careers in the Wood Products Industry are hard to find. | 1 | 2 | 3 | 4 |
| 4. | Careers in the Wood Products Industry are dull and dirty. | 1 | 2 | 3 | 4 |
| 5. | In all, the Wood Technics Program was a positive learning experience. | 1 | 2 | 3 | 4 |
| 6. | I have adequate skills for employment in the Wood Industry. | 1 | 2 | 3 | 4 |
| 7. | I feel comfortable setting up and operating basic equipment. | 1 | 2 | 3 | 4 |
| 8. | Classroom discussions / lectures will help me make a career decision. | 1 | 2 | 3 | 4 |
| 9. | Lab activities / projects will help me make a career decision. | 1 | 2 | 3 | 4 |
| 10. | Industry tours / presentations will help me make a career decision. | 1 | 2 | 3 | 4 |
| 11. | My parents have influence on my career decision. | 1 | 2 | 3 | 4 |
| 12. | Teachers in other subject areas have influence on my career decision. | 1 | 2 | 3 | 4 |
| 13. | I intend to work in the Wood Products Industry at some level. | 1 | 2 | 3 | 4 |
| 14. | The top three factors positively influencing my career choice are:<br>(Please put the corresponding letter of the factor next to the importance level) | | | | |

| | | | |
|---|---|---|---|
| A. | Pay | E. | Location |
| B. | Type of Work | F. | Job Security |
| C. | Personal Satisfaction | G. | Opportunity for Employment |
| D. | Family Influence | H. | Work Environment |

| | |
|---|---|
| | 1st most important |
| | 2nd most important |
| | 3rd most important |

Thank you for your time and willingness to participate.

# Appendix B: Survey Results

| Question 1 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | x | | |
| 3 | | | x | |
| 4 | | | x | |
| 5 | | | | x |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | | | x |
| 9 | | | x | |
| 10 | | | | x |
| 11 | | | | x |
| 12 | | | | x |
| 13 | | | | x |
| 14 | | | | x |
| 15 | | | | x |
| 16 | | | x | |
| 17 | | | | x |
| 18 | | | | x |
| 19 | | | | x |
| 20 | | | | x |
| 21 | | | | x |

| Question 2 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | x | |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | | x | |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | x | |
| 10 | | | | x |
| 11 | | | | x |
| 12 | | | x | |
| 13 | | | x | |
| 14 | | | | x |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | | | x |
| 18 | | | | x |
| 19 | | | | x |
| 20 | | | | x |
| 21 | | | | x |

| Question 8 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | x | |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | | | x |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | | x |
| 10 | | | x | |
| 11 | | | | x |
| 12 | | | x | |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | x | | |
| 18 | | | | x |
| 19 | | | x | |
| 20 | | | | x |
| 21 | | | x | |

| Question 9 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | x | |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | | | x |
| 6 | | | x | |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | | x |
| 10 | | | x | |
| 11 | | | x | |
| 12 | | x | | |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | x | |
| 16 | | | | x |
| 17 | | | x | |
| 18 | | | | x |
| 19 | | | x | |
| 20 | | | | x |
| 21 | | | | x |

| Question 3 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | x | | |
| 2 | | | x | |
| 3 | | x | | |
| 4 | | | x | |
| 5 | | x | | |
| 6 | x | | | |
| 7 | | x | | |
| 8 | | x | | |
| 9 | | x | | |
| 10 | | x | | |
| 11 | | x | | |
| 12 | | x | | |
| 13 | | x | | |
| 14 | x | | | |
| 15 | | x | | |
| 16 | | | x | |
| 17 | | | x | |
| 18 | x | | | |
| 19 | | | x | |
| 20 | x | | | |
| 21 | | x | | |

| Question 4 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | x | | | |
| 2 | x | | | |
| 3 | | x | | |
| 4 | | x | | |
| 5 | | x | | |
| 6 | | x | | |
| 7 | x | | | |
| 8 | x | | | |
| 9 | | | x | |
| 10 | x | | | |
| 11 | x | | | |
| 12 | x | | | |
| 13 | x | | | |
| 14 | | x | | |
| 15 | | x | | |
| 16 | | x | | |
| 17 | | x | | |
| 18 | x | | | |
| 19 | | x | | |
| 20 | | x | | |
| 21 | | x | | |

| Question 10 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | x | |
| 3 | | | | x |
| 4 | | | | x |
| 5 | | | x | |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | | x | |
| 9 | | | | x |
| 10 | | | x | |
| 11 | | | | x |
| 12 | | | x | |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | | x | |
| 18 | | | x | |
| 19 | | | | x |
| 20 | | | | x |
| 21 | | | x | |

| Question 11 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | x | |
| 2 | | | | x |
| 3 | x | | | |
| 4 | | | | x |
| 5 | | | x | |
| 6 | | | x | |
| 7 | | x | | |
| 8 | | | x | |
| 9 | | x | | |
| 10 | | | x | |
| 11 | | x | | |
| 12 | | x | | |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | | x |
| 16 | | | x | |
| 17 | x | | | |
| 18 | | | x | |
| 19 | | x | | |
| 20 | | | x | |
| 21 | | x | | |

| Question 5 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | | x |
| 3 | | | | x |
| 4 | | | | x |
| 5 | | | | x |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | | | x |
| 9 | | | | x |
| 10 | | | | x |
| 11 | | | x | |
| 12 | | | x | |
| 13 | | | x | |
| 14 | | | | x |
| 15 | | | | x |
| 16 | | | x | |
| 17 | | | x | |
| 18 | | | | x |
| 19 | | | x | |
| 20 | | | | x |
| 21 | | | | x |

| Question 6 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | x | |
| 2 | | | | x |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | | x | |
| 6 | | | x | |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | | x |
| 10 | | | | x |
| 11 | | | x | |
| 12 | | | | x |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | | | x |
| 18 | | | | x |
| 19 | | | x | |
| 20 | | | | x |
| 21 | | | | x |

| Question 12 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | x | |
| 2 | | x | | |
| 3 | | | x | |
| 4 | x | | | |
| 5 | | | x | |
| 6 | | | x | |
| 7 | | x | | |
| 8 | | | x | |
| 9 | | x | | |
| 10 | | | x | |
| 11 | x | | | |
| 12 | | x | | |
| 13 | | | x | |
| 14 | | | x | |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | | x | |
| 18 | | | x | |
| 19 | | x | | |
| 20 | | | x | |
| 21 | x | | | |

| Question 13 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | x | |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | x | | |
| 6 | | | x | |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | x | |
| 10 | | x | | |
| 11 | | | | x |
| 12 | | | x | |
| 13 | | x | | |
| 14 | | x | | |
| 15 | | | x | |
| 16 | | | x | |
| 17 | | x | | |
| 18 | | | x | |
| 19 | | | x | |
| 20 | | | x | |
| 21 | | | | x |

| Question 7 | | | | |
|---|---|---|---|---|
| Survey | 1 | 2 | 3 | 4 |
| 1 | | | | x |
| 2 | | | | x |
| 3 | | | | x |
| 4 | | | x | |
| 5 | | | x | |
| 6 | | | | x |
| 7 | | | | x |
| 8 | | x | | |
| 9 | | | | x |
| 10 | | | | x |
| 11 | | | | x |
| 12 | | | | x |
| 13 | | | | x |
| 14 | | | | x |
| 15 | | | x | |
| 16 | | | | x |
| 17 | | | | x |
| 18 | | | | x |
| 19 | | | x | |
| 20 | | | | x |
| 21 | | | | x |

| Question 14 | | | |
|---|---|---|---|
| Survey | 1 | 2 | 3 |
| 1 | C | A | B |
| 2 | H | A | E |
| 3 | C | B | G |
| 4 | H | F | E |
| 5 | B | A | F |
| 6 | C | E | A |
| 7 | E | F | A |
| 8 | C | A | E |
| 9 | B | C | A |
| 10 | C | F | A |
| 11 | B | C | H |
| 12 | C | B | H |
| 13 | H | A | B |
| 14 | H | A | B |
| 15 | H | A | E |
| 16 | B | A | E |
| 17 | B | C | F |
| 18 | B | E | A |
| 19 | C | F | A |
| 20 | B | E | A |
| 21 | C | H | A |