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Course Code:	DT169
Academic Year:	2013/14
Semester:	2
Module:	DT 1000 Jointing Techniques & Furniture 1
Lecturer:	Ms Jennifer Byrne
Year:	1
Submission Date:	8th May 2014

I declare that the work contained in this submission is my own work and has not been taken from the work of others save to the extent that such work has been cited within the text of this submission.

Signed:_____ Date:_____

Construction of a Small SideTable

Equivalent Antique German side table in Pine c 1850 retailing at US$1250.

Image courtesy of (www.bonninashley.com/, 2012)

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Introduction

The given Assignment was split up into four parts which were all combined to make a completed small table with for matching turned legs and a drawer(see Appendix 1 for details of each separate element and cutting list of material details) The 'Detailed diary of events & Reflection' which makes up the body of this report outlines the work and processes involved in the tables overall production and finish.

Sequence of Events

Having received the first brief of the Assignment brief and accompanying drawing details of the table top, the material needed was selected for the table top, this involved ruling out pieces with natural and machining flaws which would cause construction difficulties, an example would have been loose knots on edges of boards where gaps would be left, while others shakes or surface tear out. Of the pieces identified as suitable for use, those which matched each other in colour or grain were then selected as the final pieces to make the table top.
The next task undertaken was to identify all of the methods of production, joint types needed and to list out a sequence of events plan and estimate of the time needed to complete each of these tasks. While at the same time identifying the machines which could be used in the manufacturing process, learning about their function and use and their proper utilisation and good Health and Safety practices.

These steps were repeated for each successive stage in the making of the complete table, i.e. turning of legs, making body of table, drawer construction and fitting the table top to the table body.

The sequence of events & associated estimated & actual times are as follows:-

Event No.	**Stage 1 - Table top Sequence of Events**	**Timing (mins)**	
		Estimate	Actual
1	Make initial selection of necessary material and discuss different methods of edge joining boards.	10	10
2	Get briefing on the safe use and operation of the separate fixed and hand held machine which were to be utilised to join separate joints on the table top. Namely spindle moulder, doweling machine and biscuit jointer	25	35
3	Mirror annual rings on two adjoining boards and cut matching and aligned stopped groove with the spindle moulder	7	12
4	Mirror annual rings on next two adjoining boards and use the doweling machine to cut matching and aligned doweling holes	5	5
5	Mirror annual rings on next two adjoining boards and use the hand held biscuit jointer to cut matching and aligned grooves for biscuits	8	10
6	Cut a suitably sized loose tongue from plywood to match machined groove on adjoining boards on band saw	5	4
7	Get suitable biscuits and dowels to match reciprocal holes	5	6
8	Prepare workbench and sash clamps for gluing	10	7
9	Dry clamp pieces together to ensure good alignment and levelness	10	5
10	Spread even coat of PVA glue onto board edges, assemble and press together with sash clamps and clean off excess glue and check for levelness and prepare for drum sanding	10	12
	Total Times (mins)	95	106
	Total Times (hours)	1h 35m	1h 46m

Event	**Stage 2 – Turning Matching legs - Construction Sequence of Events**	**Timing (mins)**	
No.		Estimate	Actual
11	Review design of the legs, think and talk it through identifying any potential problems with tutor and peers. Make initial selection of necessary material.	15	35
12	Marking positions of high and low points to match given design.	10	20
13	Turn 4 matching legs to given dimensions on lathe	180	320
14	Sand off pencil marks and use various grades of sand paper to achieve a smooth finish on turned and square sections alike	10	30
	Total Times (mins)	215	405
	Total Times (hours)	3h 35m	6h 45m

Event	**Stage 3 – Making body of table - Construction Sequence of Events**	**Timing (mins)**	
No.		Estimate	Actual
15	Mark sides and rough positions of dowels on sides of legs	5	5
16	Machine dowel holes into legs and equivalent side panels	10	15
17	Mark position of dovetail joint to front legs of table for rail above drawer	10	12
18	Mark positions of mortises on front legs of table below drawer	10	17
19	Cut dovetail socket in front legs	30	45
20	Mark & cut dovetail pins in rails to suit sockets in front legs	20	30
21	Cut mortises in front legs for rail underneath drawer	10	10
22	Mark and cut tenons to suit mortises in front rails	10	18
23	Mark haunched mortises in back legs of table for back rail	15	22
24	Mark and cut haunched tenon to go into mortises of back legs	15	38
25	Set up clamps on bench and dry assemble table body and check for dimension and squareness	10	20
26	Glue in dowels, clamp legs to side rails, clean off excess glue, check for square and leave to set	10	11
27	Glue top and bottom drawer rails and back rail, clamp together, clean off excess glue and check for square	10	13
28	Make and fit runners, guides and kicker to suit drawer alignment to front of table	25	44
	Total Times (mins)	190	300
	Total Times (hours)	3h 10m	5h 0m

Event No.	**Stage 4 Drawer - Construction Sequence of Events**	**Timing (mins)**	
		Estimate	Actual
29	Review design of drawer, think and talk it through identifying any potential problems with tutor and peers. Make initial selection of necessary material.	10	35
30	Check size of opening for drawer in table body. Mark out position of lapped dovetail sockets on drawer front and cut out.	30	45
31	Use dovetail sockets to mark out dovetail pins on corresponding sides of drawer and cut out to suit	40	65
32	Mark dovetail socket out and cut out socket on drawer back	20	40
33	Use dovetail sockets to mark out dovetail pins on corresponding sides of drawer and cut out to suit	30	25
34	Groove drawer side and front to suit thickness of drawer base	10	15
35	Sanding finished separate drawer pieces, through grades of 180 & 240 grit by hand, while following good Health & Safety practice by using extraction for dust generated.	10	10
36	Prepare clamps and packing blocks for dry assembly of drawer, clamp, check for squareness and check for fit in table	10	20
37	Glue up all joints, clamp and check for square and no twist. Cleaning off excess glue with damp cloth.	10	14
38	Cut drawer base to suit assembled drawer	10	8
39	Drill hole to front of drawer for pull handle, fix and screw in place	5	10
40	Slide drawer base into place & panel pin base to drawer back	5	5
41	Check for drawer fit and make necessary adjustments to	5	15

	runners, guides and kickers		
	Total Times (mins)	195	307
	Total Times (hours)	3h 15m	5h 7m

Event	**Fitting Top - Construction Sequence of Events**	**Timing (mins)**	
No.		Estimate	Actual
42	Use hand held router to make a series of successive passes of increasing depth with suitable edge moulding bit (fitted with guide bearing). The use of extraction, googles & ear protection to be utilised	10	15
43	Use Kreg guide to drill fixing holes through rails of table body and fix the top to the body with screws	15	20
44	Check table for levelness and adjust as necessary	10	5
45	Check table for any remaining pencil marks, excess glue or rough finish an remove by sanding	10	10
	Total Times (mins)	45	50
	Total Times (hours)	0h 45m	0h 50m

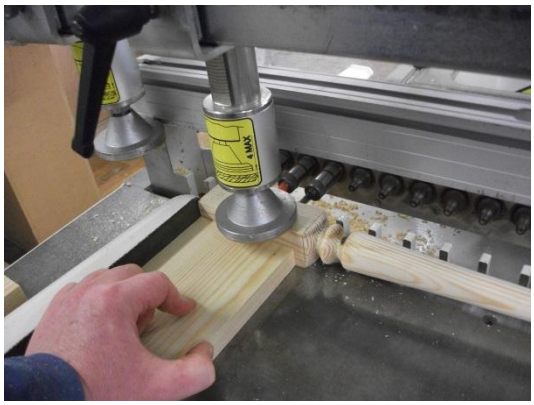
Event No.	**Overall total time - Construction Sequence of Events**	**Timing (mins)**	
		Estimate	Actual
46	Total time to make table	740	1168
	Overall Total times	12 h 20m	19h 28m

When each of the machines were used to complete necessary tasks and operations, proper Health and Safety procedures were followed, where guards, push sticks/blocks, finger boards, dust & chip extraction and personal protective equipment was utilised to reduce and minimise the associated risks with the use of the machines.

Pictorial sequence of events

Event no. 12 – Matching leg design

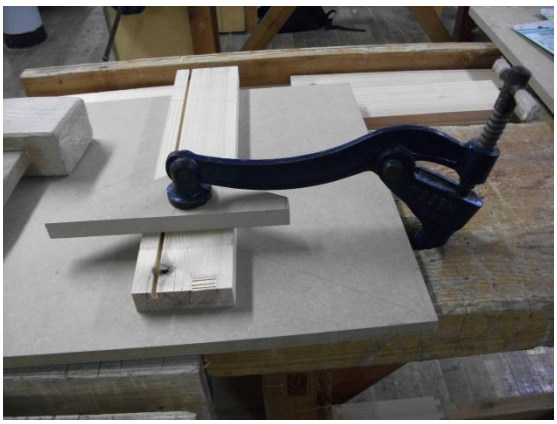
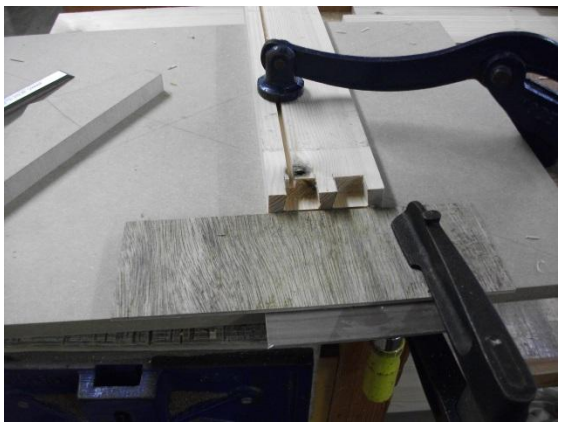
Event no. 13 – Turn 4 matching legs



Event no. 16 – machine dowel holes in leg

Event no. 21 – Cutting mortises in front leg


Event no. 25 and 26 – Gluing, clamping and checking for square

Event no. 30 – Cutting out lapped dovetail sockets

Event no. 30 – Using hand held router to mould edge on table top

Reflections and Conclusion

This assignment brought together many new challenges and learning experiences from turning, to dowelling and biscuit jointing. Trying to get 4 table legs to match was quite frustrating but it was found that the variances between the legs were not as pronounced when they were separated on the table as opposed to the closer loose inspection off the lathe.

It was found that my hand skills and confidence are improving with each assignment, but that the estimating of the time necessary for each sequence still needs to be improved. Being able to compare the various method of jointing board together was good with each method being found to have its own merits and associated difficulties such as alignment. Also the principles of how a drawer works and is supported within furniture with the need for balancing a good fit with a smooth operation became more apparent.

Even though the pine material of the table is inexpensive compared to other hardwood it was found that the overall look was pleasing and that finishing will only serve to enhance the character of the wood and the piece. Finally it can be seen from the antique example on the cover page, that a table like this can last the passing of time and its value can increase well beyond the lower costs of the material used.

Works Cited

(2012). Retrieved May 7, 2014, from www.bonninashley.com/: http://www.bonninashley.com/pine-furniture/antique-german-side-table-in-pine-with-turned-legs-and-drawer-c.-1850/

Appendix

Appendix 1 – Dimension details of Stage 1 to 4 of side table with drawer.