

CASE STUDY - 6 Copying/Sorting

TASK TITLE: Copying/Sorting

Task Description:	<p>Copying and sorting may involve the use of a cart, boxes of paper, photocopier and loose paper.</p> <p>Typical jobs in which copying and sorting is performed include (not necessarily limited to):</p> <ul style="list-style-type: none">• customer service• general administrative support• librarians
Job Performance Measures Most often impacted by Copying/Sorting:	Error rates, number of copies made.
Typical Employee Comments about Copying/Sorting:	Employees typically complain about discomfort and/or stiffness in the back/torso, legs/feet, hands/wrists, arms, and shoulders/neck.
Suggested Level II Analysis:	Postural analysis, light level analysis.

Case Study 6 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
1. Arms held away from body	<ul style="list-style-type: none"> • Pulling copies from copier • Sorting paper into separate piles on work surface(piles away from work surface edge • Sorting shelves too high • Carrying boxes of photocopy paper 	27. Locate sorting piles near work-surface edge.	✓		low	low	med
		32. Lower sorting shelves below shoulder height.	✓		low	low	med
		111. Use step stool to access high-level shelves.	✓		low	low	med
		104. Use cart to move boxes of photocopy paper.	✓		low	low	med
2. Repeated reaching	<ul style="list-style-type: none"> • Shelves too high for sorting • Items used frequently not positioned close to the body 	32. Lower sorting shelves below shoulder height.	✓		low	low	med
		111. Use step stool to access high-level shelves.	✓		low	low	low
		35. Move items into work zone.	✓		low	low	low
		64. Position body closer to work.	✓		low	low	low
		87. Raise the work surface: <ul style="list-style-type: none"> • place boxes or reams of paper at knuckle height; • provide a table to minimize reaching. 	✓	✓	low	low	med
					med	low	med

Case Study 6 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
3. Shrugging: working with the shoulders shrugged	<ul style="list-style-type: none"> Rarely occurs 	N/A					
4. Repeated arm forces	<ul style="list-style-type: none"> Pulling boxes of photocopy paper Taking out stacks of photocopy paper from the photocopy boxes 	95. Train proper body mechanics: <ul style="list-style-type: none"> minimize reaching by positioning body as close to the load as possible; minimize rushing and high speed movements. 	✓		low	low	low
5. Holding/ carrying materials	<ul style="list-style-type: none"> Carrying and holding photocopy paper box Carrying stacks of paper 	104. Use available cart to move boxes of photocopy paper. 73. Provide appropriate cart.	✓	✓	low med to high	low	med med
6. Cradling the telephone between the neck and shoulder	<ul style="list-style-type: none"> Rarely occurs 	N/A					
7. Head bent down, up, or neck twisted	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 6 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
8. Bent wrists	<ul style="list-style-type: none"> Pushing book down to copy 	95. Train proper body mechanics: <ul style="list-style-type: none"> minimize awkward wrist postures. 	✓		low	low	med
9. Repeated wrist movements	<ul style="list-style-type: none"> Sorting paper into stacks Handling paper  <p>Figure 6.1</p>	95. Train proper body mechanics: <ul style="list-style-type: none"> minimize awkward wrist postures. 	✓		low	low	med
		91. Rotate staff members between tasks.	✓		low	low	med
		88. Redesign job: <ul style="list-style-type: none"> eliminate unnecessary document handling by combining tasks; eliminate unnecessary activities. 	✓		med	med	high
10. Repeated finger movements	<ul style="list-style-type: none"> Rarely occurs 	N/A					
11. Hyper-extension of finger/thumb	<ul style="list-style-type: none"> Rarely occurs 	N/A					
12. Hand forces	<ul style="list-style-type: none"> Pulling copies from copier (using pinch grips) Pinch grips sorting paper 	95. Train proper body mechanics: <ul style="list-style-type: none"> use both hands or use a full-hand grip whenever possible. 	✓		low	low	low
		70. Provide adequate storage/equipment:		✓	low to med	med	med to high

Case Study 6 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	 <p>Figure 6.2</p>	<ul style="list-style-type: none"> eliminate unnecessary items from storage in order to increase available space. provide a copier designed to copy books <p>88. Redesign job:</p> <ul style="list-style-type: none"> eliminate unnecessary document handling by combining tasks; eliminate unnecessary activities. 		✓	low to med	med	med to high
13. Hard edges	<ul style="list-style-type: none"> Rarely occurs 	N/A					
14. Repeated forearm rotation	<ul style="list-style-type: none"> Turning pages Handling documents 	<p>88. Redesign job:</p> <ul style="list-style-type: none"> eliminate unnecessary document handling by combining tasks; eliminate unnecessary activities. 		✓	low to med	med	med to high
15. Leaning forward or poor lower back posture	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 6 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
16. Repeated bending	<ul style="list-style-type: none"> Shelves positioned too low  <p>Figure 6.3</p>	24. Kneel to access low level of photocopier.	✓		low	low	low
		87. Raise work surface: <ul style="list-style-type: none"> avoid lifting heavy items (e.g., boxes of copier paper) from floor level; place heavy items on sturdy tables or shelves. 	✓	✓	med	low	low
	<ul style="list-style-type: none"> Reaching for items too far from body  <p>Figure 6.4</p>	26. Locate heavy items between knuckle and elbow height: <ul style="list-style-type: none"> middle shelves on a storage shelf should be reserved for the heaviest items; provide tables or storage between knuckle and elbow height for heavy items. 	✓	✓	low to med	low	low
		35. Move items into work zone.	✓		low	low	low
		54. Position body closer to work.	✓		low	low	low

Case Study 6 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
	<ul style="list-style-type: none"> Reaching for items too far from body 	34. Move items closer to body: <ul style="list-style-type: none"> for example, reduce or eliminate obstructions that prevent person from being closer to work. 95. Train proper body mechanics/posture: <ul style="list-style-type: none"> encourage person to keep the load as close to the body as possible while handling loads; move as close to the load as possible before lifting. 	✓	✓	low to high	med	med
			✓		low	low	low

Case Study 6 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
17. Lifting forces	<ul style="list-style-type: none"> Handling heavy items while bent and/or reaching for boxes, stacks or paper or files 	26. Locate heavy items between knuckle and elbow height: <ul style="list-style-type: none"> middle shelves on a storage shelf should be reserved for the heaviest items; provide tables or storage between knuckle and elbow height for heavy items. 34. Move items closer to body: <ul style="list-style-type: none"> for example, slide items closer to the edge of a table before lifting. 104. Use available cart to move boxes, files etc.: <ul style="list-style-type: none"> handle heavy items on carts; provide appropriate sized carts for handling items in confined spaces. 95. Train proper body mechanics: <ul style="list-style-type: none"> encourage person to avoid rushing while handling items; allow adequate time to perform the task safely. 	✓	✓	low to med	low to med	med to high
			✓		low	low	med
			✓		low	low	med
			✓		low	low	low
18. No foot support	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 6 (continued)

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
19. Edge of seat or worksurface presses into legs	<ul style="list-style-type: none"> Rarely occurs 	N/A					
20. Hard floor surfaces	<ul style="list-style-type: none"> Standing and walking on hard surfaces 	110. Use proper footwear.	✓		low	low	low
		72. Provide anti-fatigue mats.		✓	med	low	low
21. Kneeling/squatting	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 6 (continued)

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
22. Staring at screen or document	<ul style="list-style-type: none"> Rarely occurs 	N/A					
23. Glare	<ul style="list-style-type: none"> Rarely occurs 	N/A					
24. Light levels	<ul style="list-style-type: none"> Rarely occurs 	N/A					
25. Screen distance	<ul style="list-style-type: none"> Rarely occurs 	N/A					
26. Difficult to read	<ul style="list-style-type: none"> Rarely occurs 	N/A					