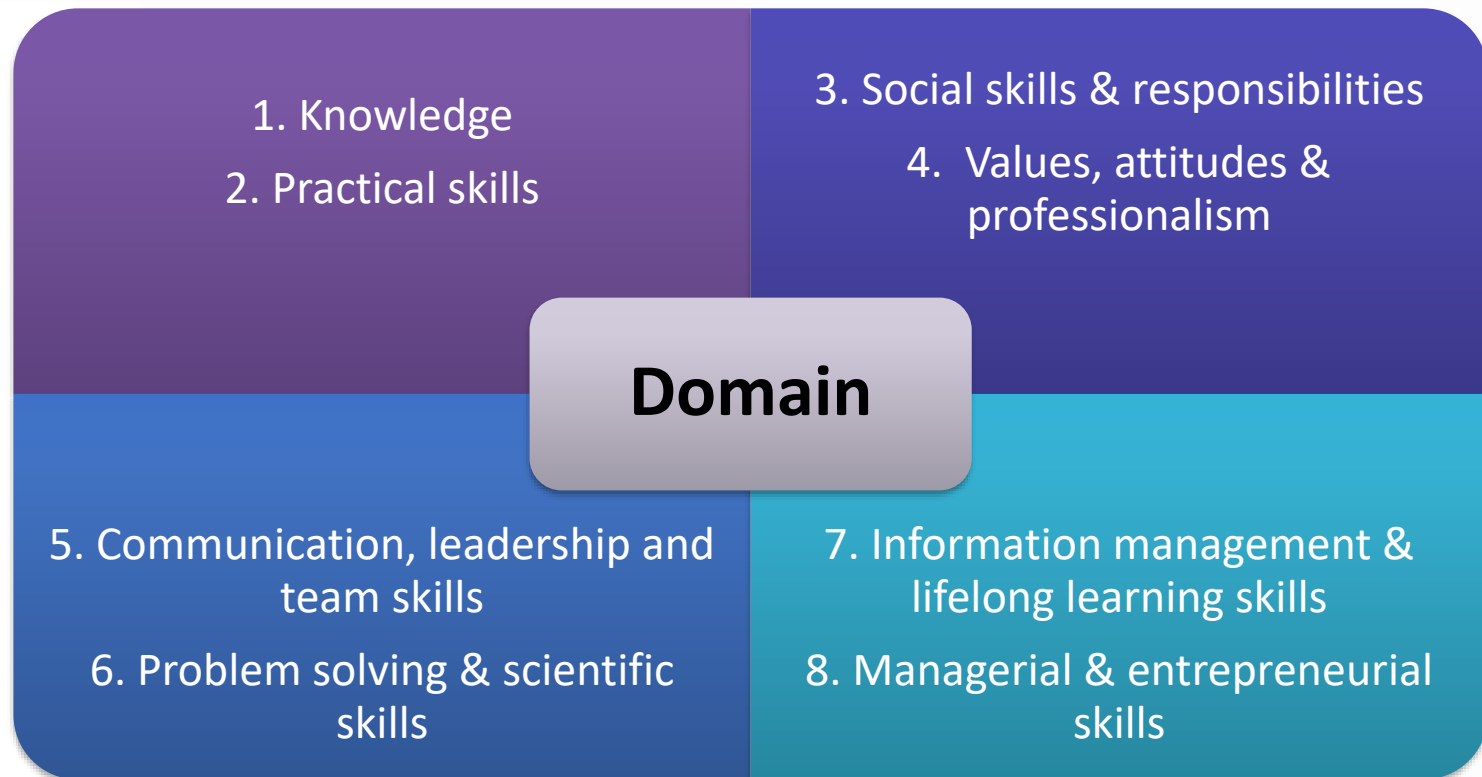




The Potential and Benefits of Collaboration (Industry Cooperation)

**In the context of Product Design
Programme (USM) Versus
Furniture Manufacturing Towards
Industry 4.0**

**Hafeezur Rahman b. Mohd Yassin
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School of the Arts
Universiti Sains Malaysia**



- Above are domains which should be achieved as learning outcomes in the HE (outlined by MQF)
- It is clear that the involvement of the industry in the learning process is necessary to help to strengthen the learning outcomes of graduates to be prepared to the real work environment.



No.	Domain	Provider	
		Higher Education Institution	Industry
1	Knowledge	(Theory & basic practice)	(Real practice / scenario of working environment)
2	Practical skills		
3	Social skills and responsibilities		
4	Values, attitudes and professionalism		
5	Communication, leadership and team skills		
6	Problem solving and scientific skills		
7	Information management and lifelong learning skills		
8	Managerial and entrepreneurial skills		



1 Hafeezur Rahman Mohd yassin

- Industrial Design (Furniture & Product Design)

2 Dr Shamsu Mohamad

- Ceramic & Product Design

3 Dr Ahmad Zuhairi

- Industrial Design (Product & Service Design)

4 Dr Siti Suhaily

- Industrial Design (Product Design & Materials)

5 Mohd Firdaus

- Technician (Product & Furniture Design)

6 Dr Mohd Najib

- Ceramic & Product Design (Materials & Processes)

7 Dr Muhammad Jameel

- Product Design & Form Giving

8 Nor Azlina (*on study leave)

- Industrial Design (Product Design & Ergonomic)



SEMESTER 1			SEMESTER 2		
Component	Name of courses	Unit	Component	Name of courses	Unit
Core Courses	Fundamental Courses in Design	13	Core Courses	Fundamental Courses in Design	8
				Visual Presentation Techniques	3
University Course(s)		4	University Course(s)		8
Total unit		17	Total unit		19
SEMESTER 3			SEMESTER 4		
Component	Name of courses	Unit	Component	Name of courses	Unit
Core Courses	Model Making Techniques	2	Core Courses	Technical Drawing 2 (Autodesk AutoCAD)	2
	Computer Modeling 1 (Autodesk Inventor)	2		Computer Modeling 2 (Autodesk 3D Max)	2
	Technical Drawing 1 (Autodesk AutoCAD)	2		Ergonomics in Design	2
	Materials and Processes	2		Product Design I	3
University Course(s) / Elective course(s) / Minor course(s)		9	Furniture Design I		3
			Research Methodology		4
			University Course(s) / option		2
Total unit		17	Total unit		18

- Product Design Department decided to collaborate with the industry players and use blended learning approach on some of the courses in the programme as to achieve the learning outcomes (outlined by the MQF).
- Highlighted are the courses (furniture design related) that identified by the department which need input from the industry in order to strengthen the learning outcomes of the courses.



SEMESTER 5			SEMESTER 6		
Component	Name of courses	Unit	Component	Name of courses	Unit
Core Courses	Industrial Design Management	3	Core Courses	Design Project 1 (Industrial Design)	4
	Product Design 2	3		Creative Entrepreneurship	4
	Furniture Design 2	3	Elective course(s) / Minor course(s)		7
University Course(s) / Elective course(s) / Minor course(s)		9			
Total unit		18	Total Unit		15
SEMESTER 7			SEMESTER 8		
Component	Name of courses	Unit	Component	Name of courses	Unit
	Design Project 1 (Industrial Design)	4		Industrial/practical Training	10
Elective course(s) / Minor course(s) / Option		8			
Total unit		12	Total unit		10
			Overall total unit		128

- The contribution or cooperation needed from the industry are more on moulding the students so that they understand the needs of the industry and are better prepared after graduated



No	Courses	Industry involvement
1	Materials And Processes	<ul style="list-style-type: none"> - Student visit to industries - Seminar specific on furniture materials and processes
2	Ergonomic In Design	<ul style="list-style-type: none"> - Student visit to industries - Seminar specific on furniture ergonomic
3	Furniture Design 1	<ul style="list-style-type: none"> - Live project from industries - Furniture design competition
4	Furniture Design 2	<ul style="list-style-type: none"> - Live project from industries - Furniture design competition
5	Design Project 1 (FYP)	<ul style="list-style-type: none"> - Live project from industries - Furniture design competition
6	Design Project 2 (FYP)	<ul style="list-style-type: none"> - Live project from industries - Furniture design competition
7	Industrial / Practical Training	<ul style="list-style-type: none"> - Industrial training placement and supervision

FYP – Final Year Project



1st Meeting with MFA ~ 09 Oct 2018



Potential collaboration between university & furniture manufacturing

University	Activity	Industry
The task		The task
- Providing student to enrol practical training.	Practical training	- Providing practical training placement.
- Implementing live project on some courses	Project Consultation	- Consultant (technology/market needs etc)
- Organize / co-organize a design competition - Student / staff join the competition - Judging (staff)	Design Competition	- Organize / co-organize a design competition - Funding the competition - Judging
- Staff as a researcher - Student (assist)	Industry research Fund	- Provide the funding (based on their needs ~ R,D&D)
- Staff (consultant - design) - Student (live project - design)	Project Collaboration (Endowment)	- Providing the task/project - Providing the funding (endowment)
- Student's Final Year Project	Sponsorship	- Funding the project (prototype/whole project)



University	Activity	Industry
The benefit		The benefit
<ul style="list-style-type: none"> - Student Industrial experience and exposure - Industrial Networking / linkages 	Practical training	<ul style="list-style-type: none"> - Potential of new recruitment - Assisting on product design & development - To fulfil the CSR (Corporate Social Responsibility) task.
<ul style="list-style-type: none"> - Industrial Networking / linkage - Staff / student industrial Experience, Exposure and contribution. - KPI generation (staff / university) 	Project Consultation	<ul style="list-style-type: none"> - Design Problem solution - To increase design value and variation.
<ul style="list-style-type: none"> - Student Industrial Experience and Exposure (live project) - Industrial Networking / linkages - Endowment 	Design Competition	<ul style="list-style-type: none"> - Tax exemption (CSR) - To fulfil the CSR (Corporate Social Responsibility) task. - Design collections

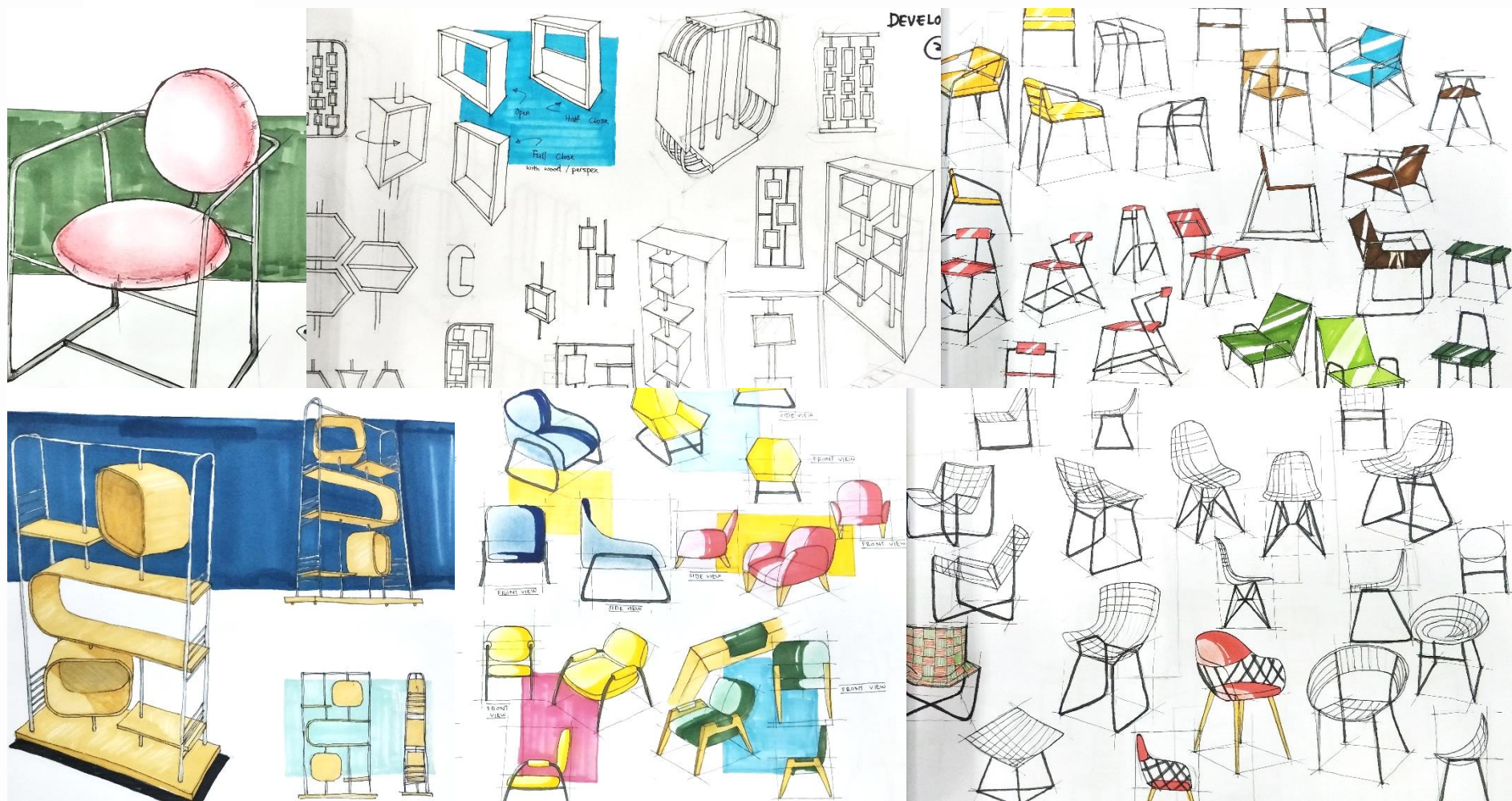


University	Activity	Industry
The benefit		The benefit
<ul style="list-style-type: none"> - Public private research network - External research funding - KPI generation 	Industry research Fund	<ul style="list-style-type: none"> - Tax exemption (R D & D) - Design Problem solution - To increase design value and variation. - Product development and manufacturing. - To fulfil the CSR task.
<ul style="list-style-type: none"> - Industrial Networking / linkages - Endowment - KPI generation 	Project Collaboration (Endowment)	<ul style="list-style-type: none"> - Design Problem solution (R D & D) - To increase design value and variation. - Product development, manufacturing & commercialization - CSR contribution.
<ul style="list-style-type: none"> - Industrial Networking / linkages - Endowment - KPI generation 	Sponsorship	<ul style="list-style-type: none"> - Tax exemption (CSR) - Networking - To fulfil the CSR (Corporate Social Responsibility) task.











E O
2 橱

THE MINIMAL CONCEPT

readysh.elf

ABSTRACT
EO² is a shelf that design inspired by the design concept of tetris block, while being expandable and minimalist. EO² refers to the shelf that have an alphabet E and 2 boxes. EO² is made by using OSB wood and metal.

ENVIRONMENT

01 书房
studyroom

02 房间
bedroom

03 客厅
livingroom

PROBLEM STATEMENT

Limited shelving space are troublesome for some users
Size consideration is needed for selling online

DESIGN STATEMENT

Designing a shelving system using eco-friendly material that suits the environment nowadays.

target user location

studio apartment
apartment

single tenant
young adult
newly married couple

METAL

OSB WOOD



3-BISM

Abstract
Cafe nowadays have limited space for seating resulting customer have to wait outside for a long queue. Therefore, there will be more concern to increase seating area yet saving space idea. 3-BISM not only functional for extra seat, it able to decorate a plain wall and provide shelving function for your collection or magazine tool

Problem Statement
Space Limited
There are alot of cafe lack of seat during peak hour

Objective
To identify the problem faced by user who having a limited space area.
To create a new focus point, a new backdrop

Target Market
Cafe and office

Concept
Minimalist
Integrate shelving system
Nesting mode



ScHELF

ABSTRAK
Mereka bentuk sebuah rak untuk meletakkan buku dan koleksi-koleksi yang dimilikinya. Konsep yang diterapkan pada rak ScHELF ini adalah "Adjustable". Mengambil inspirasi dari rekaan Viktor Matic iaitu rak "WWW" yang di tafsirkan dari archetype.

KRITERIA REKABENTUK

- Adjustable
- Pemasangan "Knockdown"
- Sebagai perhiasan

KEISTIMEWAAN

Tali sebagai elemen estetik yang diletakkan pada rak tersebut sebagai fungsi mempelbagaikan bentuk keadaan buku untuk diletakkan.

Elemen cantiliver diterapkan pada ScHELF ini dengan membawa beban di setiap bucu ScHELF.

TEMPAT

Penggunaan rod bergigi (Thread rod) bagi mengubah ketinggian para yang diinginkan mengikut kehendak pengguna.

CADANGAN BAHAN

USM APEX SENI

AKADAMIK, MADRASKAH BAHASA INGGRIS (MAB) - UNIT 21/REKABENTUK PERAKOT 1





FORM

CONCEPT DESIGN

CONCEPT
The main challenge was to create a screen that could be used in many different ways. The screen should be able to be used as a room divider, a bookshelf, a desk, or a partition wall. The design should be simple, functional, and easy to assemble. The screen should be made of wood and have a modern, minimalist look. The screen should be able to be used in a living room, a study, or a bedroom. The screen should be able to be used as a room divider, a bookshelf, a desk, or a partition wall. The design should be simple, functional, and easy to assemble. The screen should be made of wood and have a modern, minimalist look. The screen should be able to be used in a living room, a study, or a bedroom.

TARGET USER
The target user is a person who needs a room divider, a bookshelf, a desk, or a partition wall. The user should be a student, a professional, or a homeowner. The user should be looking for a modern, minimalist, and functional design. The user should be looking for a design that is easy to assemble and disassemble. The user should be looking for a design that is made of wood and has a modern, minimalist look.

MATERIAL
The material used for the screen is wood. The wood should be a dark color, such as walnut or oak. The wood should be solid and have a smooth finish. The wood should be easy to work with and should be able to be joined together without the need for glue or nails. The wood should be able to be used in a living room, a study, or a bedroom.

TECHNICAL DRAWING

COMBINATION PART

EXPLODED VIEW

ISOMETRIC VIEW







Thank You