

ACTION PLAN

Testing and Evaluation

-Conduct a series of tests to asses how effective the solution is

Planning and Production

-Creation of the working drawings
-Organisation of the construction process

Brief

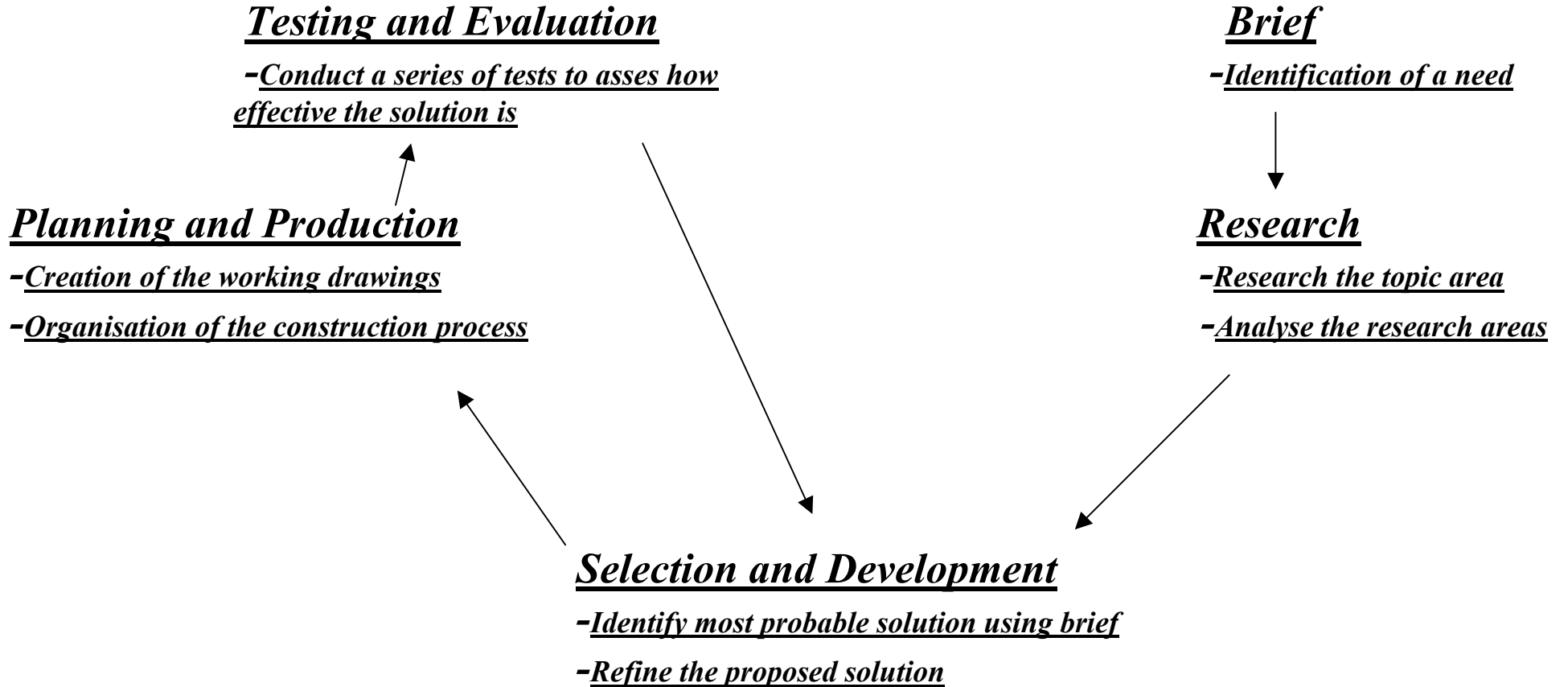
-Identification of a need

Research

-Research the topic area
-Analyse the research areas

Selection and Development

-Identify most probable solution using brief
-Refine the proposed solution



FINANCE PLAN

Material	Estimated cost	Actual cost	Difference
P.V.C piping +fittings	\$30	\$120.67	+\$90.67
Poly piping	\$10	\$8.64	-\$1.36
Shadecloth	\$40	\$35	-\$5
Foam coating	\$10	N/a	N/a
Washing basket	\$10	\$3	-\$7
Metal frame	\$5	\$10	+\$5
Fedder pipe	\$2	N/a	N/a
Rubber for mat	\$5	\$0	-\$5
Surface for mat	\$10	\$0	-\$10
Miscellaneous	\$10	\$23	+13
Folio + pictures	\$10	\$38	+28
TOTAL	\$142	\$238.31	+96.31

Identification, Selection, and Justification of Resources

My Practice net, mat and feeder will consist of the following resources, and an explanation of why I choose each one.

Shadecloth

- *Cheap, strong and durable, and weather resistant.*
- *Prawn netting is very strong and durable but is very heavy, cumbersome and expensive.*
- *Chicken netting poses a safety risk and is not aesthetically pleasing.*

PVC pipe

- *Light, easy to work with and can be put together and taken apart with minimal fuss. Is also ver flexible.*
- *Steel pipes, are too heavy and hard to transport.*
- *Wood is too cumbersome and the ball will ricochet.*
- *Tent poles are too fiddly to take apart and put together.*

Ball holder and frame

- *A washing basket is light and has handles, and allows easy access to refill the balls or see how many are left.*
- *A plastic bucket would prove to be an unsuitable shape.*
- *A washing trolley frame will also be used to transport the basket as it fits the basket shape.*

The mat

- *A thick rubber underlay made from conveyer-belt rubber,*
- *Sports Carpet* or similar material for the surface.*
- *A rubber tee for drives will also be incorporated into the design.*
- *Wood would be a bad choice because shots that are hit too “fat” could dig into the wood, providing a jarring clunk and damaging the club.*
- *Club heads hit straight into rubber would just bounce and skid.*
- *Synthetic mat covering is a very expensive choice.*
- **I obtained my carpet from a local indoor sports centre who was recarpeting their playing courts and had spare carpet left over.*

Despite my poor time management I am fairly happy with the result.

The proposal showed that a solution to the problem of ineffective golf practice was needed, and my golf net and accessories does just that.

Due to my poor time management I was unable to give the golf net a thorough testing with golf clubs but was able to test the durability and rebounding effect of the net by throwing several objects at it including golf balls, blocks of wood and rocks. The result was surprisingly effective, with the object rolling a short distance down the net before dropping to the ground.

The high-pressure pipe means that it will not crack, not even when stood on or placed in a vice.

I am disappointed that I didn't get time to construct a working ball release system but tests of a prototype were promising.

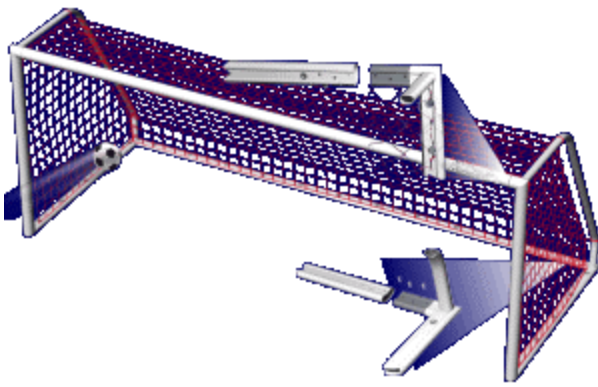
Research



This picture inspired me to create my own version of a golf ball dispenser. This one retails for US\$99



This cross section of a mat highlighted the need for a cheap, efficient mat. This one costs US\$305



This picture shows a free standing, sturdy golf net. This one is about US\$180

Altered angle of trolley

Incorporated new wheels into trolley

New latch design-from Ro to Me

New latch design- From Me to Erbsy

Different shape of poly pipe ▶ shortened overall height

Ripped carpet

88 degree corner pieces

Not enough shadecloth

Different colour/strength shadecloth

Obtrusive corners

Difficulties in attaching shadecloth

The trolley had to be lowered at one end to allow enough gravitational pull to effectively work the ball feeder.

(Due to time constraints I was unable to construct the ball feeder)

New wheels were incorporated into the design of the trolley. Although only two wheels could be found, they add an aesthetically pleasing touch.

The Poly Pipe was shortened because of the difficulties of creating an ellipse –shaped piece of shadecloth. This reduced the overall height and reduced the tension of the shadecloth, resulting in less rebound.

The top of the driving mat was unfortunately ripped during transport to the school. Luckily I was able to fix the problem using contact cement and a wood burner to melt the edges together.

The joints are regulation plumbing corners and are at an angle of 88 degrees. Although this helped in aiding the curve of the Poly Pipe it caused a problem with the base of the frame because the pipe did not fit squarely into the joints. This was overcome by slightly tapering the ends of the pipe on the disc sander.

The different types of shadecloth originally came about due a miscalculation of the lengths. However, the two different strengths worked out because the strongest was used at the back to stop the initial impact and the two side pieces stop balls bouncing away.

The unique shape of the base cause a problem when attaching the shadecloth. I resolved this problem by slightly raising the level of the shadecloth above the bottom frame, but still attaching the shadecloth to it to stop balls going under the shadecloth.

The shadecloth was difficult to sew together because it is awkward trying to sew a straight piece to a curved piece.



The price estimated in my finance plan is so short because the pipe that I bought was high pressure pipe, strong enough to withstand golf balls, several people standing on it and even a wood vice! The price in my finance plan is for normal grade P.V.C. pipe.

The driving mat was originally going to have a wooden frame around the rubber bottom. However this is unnecessary as it reduced portability, adds weight and complexity to the design.

These two examples highlight the need for a cheap effective driving mat.

These examples show the many different styles and price ranges of practice nets.