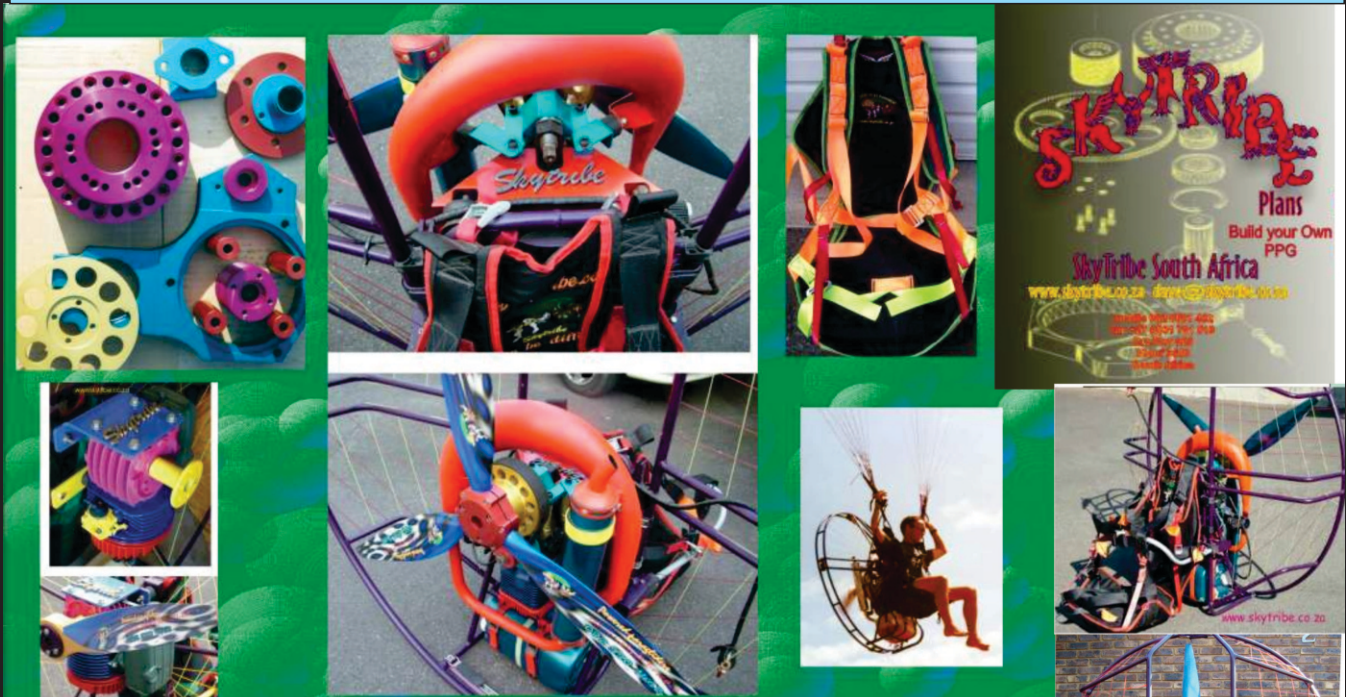


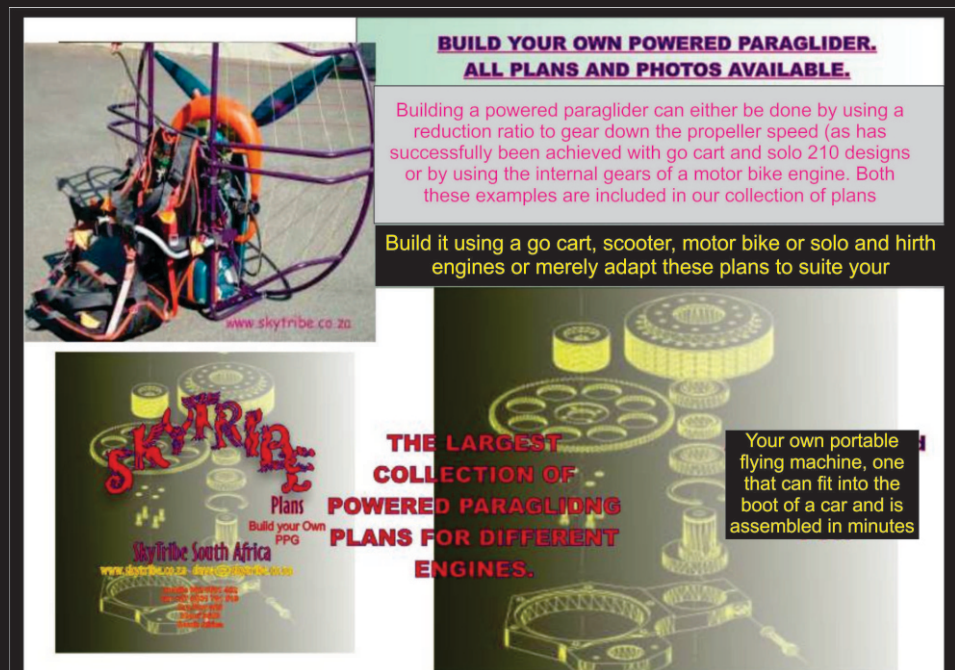
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what is thought to be the largest collection of ppg plans world wide

Build your very own powered paraglider from our collection of plans. These include photo stages and examples of dimensions and drawings we have used for a range of designs. These incorporate the Solo and Hirth, different motor bike and go cart engines. There is nothing preventing these concepts being extended to other configurations.

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**BUILD YOUR OWN POWERED PARAGLIDER.
ALL PLANS AND PHOTOS AVAILABLE.**

Building a powered paraglider can either be done by using a reduction ratio to gear down the propeller speed (as has successfully been achieved with go cart and solo 210 designs) or by using the internal gears of a motor bike engine. Both these examples are included in our collection of plans

Build it using a go cart, scooter, motor bike or solo and hirth engines or merely adapt these plans to suite your

**THE LARGEST
COLLECTION OF
POWERED PARAGLIDING
PLANS FOR DIFFERENT
ENGINES.**

Your own portable flying machine, one that can fit into the boot of a car and is assembled in minutes



MAKE YOUR OWN SYPHON SHAKER

Welcome to skytribe's plans on how to make your own automatic syphoning device. There will be no more spillage, mouthsfull of petrol and liquid. No more spontaneous combustion. Simply place the syphon shaker in the liquid, (first elevate it, of course) shake the nozzle a few times , keeping it well within the liquid and within a short time the liquid will automatically start syphoning under the influence of gravity.



Two options are given in this document.

OPTION 1 Uses off the shelf PVC and plastic fittings used for plumbing fittings and various valves. One uses male and female adapters and end caps, hose adapters, sockets and bushes. Either the groove, bar or a combination of both may be employed.

OPTION 2 This can be turned on a lathe and because most of the design is one solid piece only the bar method is used and implemented to allow water to exit. This bar is either inserted internally or externally & then sealed.

Many more plans available. Just have a look at
www.skytribe.co.za



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Various sizes of syphon shakers. Eventually as one goes too big too much pressure is needed and it becomes inefficient.



Option 2

1b Using an inserted bar and a lathe



Option 1

1A cutting grooves

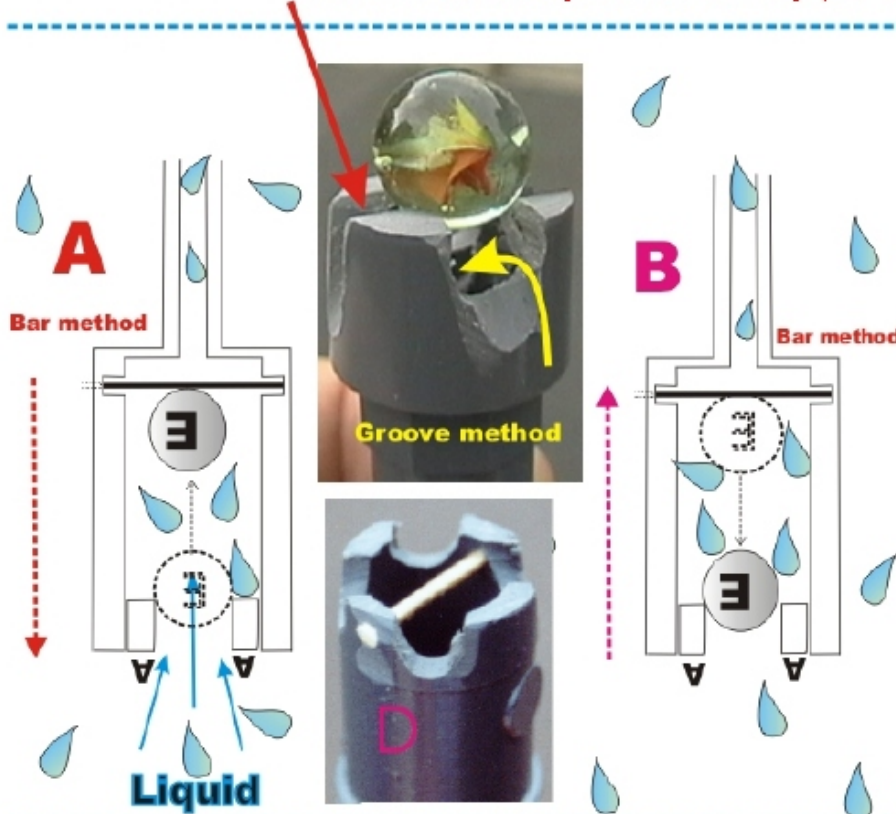
Using off the shelf fittings.

1b Using an inserted bar



HOW THE SYPHON SHAKER WORKS.

If the exit nozzle is smaller than the marble and providing half moons are cut as described a bar may not be necessary. (As shown below)



Example using option 1,

Design 2

As the nozzle is plunged downwards inside the liquid, fluid is forced up the pipe (A). As the pipe is retracted to start the down ward stroke again, (B), the marble is sent down wards and closes off the entry hole, thereby preventing the fluid already inside the pipe from falling back out (B). The downward stroke (that sends liquid up into the pipe (A)) is then started again.

The bar at the base of the shaker is simply there to prevent the marble from closing off the exit hole which fluid flows out from during the down ward stroke (A).

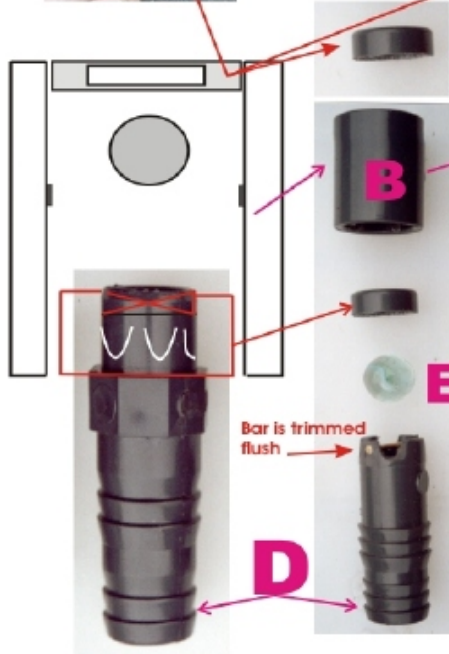
Before trimming shorter.



After trimming



This PVC fitting sometimes has a circular ridge running around the inside centre. It is a good idea to take a file and file parts of those away around the inside.



Option 1 . Using off the shelf PVC fittings

* I recommend using the bar system in conjunction with the half moons

After grinding half moons & inserting bar & shortening. Before grinding half moons and inserting bar(optional)



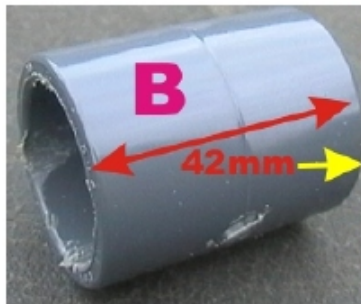
Design 1

"Off-the-shelf" PVC fittings continued.

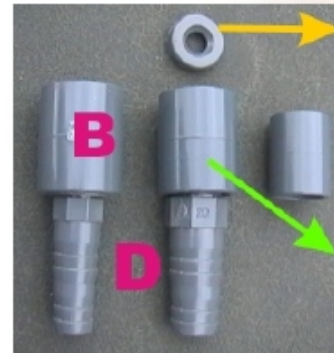
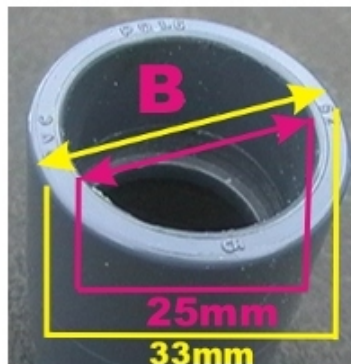
Design 1

Using bar and half moons

OPTION 1. Using "Off the shelf" PVC or plastic fittings



You can get a standard fitting off the shelf that is longer than this dimension, then all the better. Refer to option 2 for increased dimension.



End cap:
25mm OD

The marble or ball bearing will move up and down inside this hollow piece.



Spacer for (A)
if necessary

20 OD / 15 OD 16mm OD (A) 16mm ID 25 OD

Examples using no bar & off the shelf fittings.



Round file used to remove internal ridge if present.



Internal ridge removed at intervals



Internal ridge



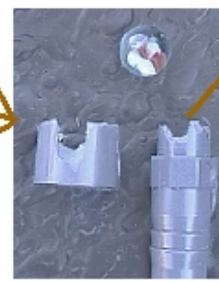
Optional spacer, glued to D. Used should D not fit into B, prior to cutting half moons and shortening



Top cap after trimming



Top cap before trimming



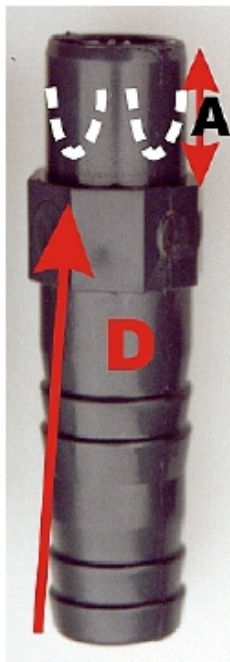
1 & 2

Grooves for water to flow out under the marble. If there were no grooves the marble would simply get sucked against the exit pipe and no water would be able to flow out.

Glue 1 and 2 together before cutting grooves or half moons. Shown here is an alternative to "Option 1" ie not using any bar.

Using bar and half moons.

 = exit hole



Before cutting half moons and inserting bar



After cutting grooves and inserting bar. Dimension A is also shortened. After Insertion of brazing rod grind flat with angle grinder or sander.

This bar is to prevent the marble from being sucked tight against the exit hole. If the marble is larger than the exit hole then this bar is not necessary and simple grooves will suffice.

Half moons created with an angle grinder and disk attached.



Example using no bar

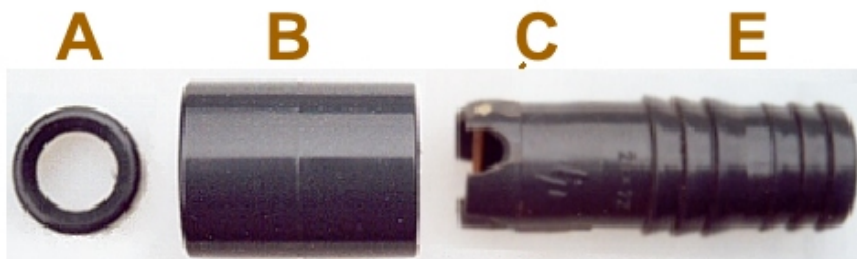
Option 2: MAKING THE SHAKER FROM A SOLID PIECE OF MATERIAL

A is a separate cap
B, D are made out of one solid piece
C = Rod
E = Marble

No Half moon grooves are cut. Instead a groove is cut radially at the base using a lathe at the base in the same position as shown, and the rod forced down the tube. Alternatively drill a hole straight through from the outside, slide the rod through and plug the hole from the outside!

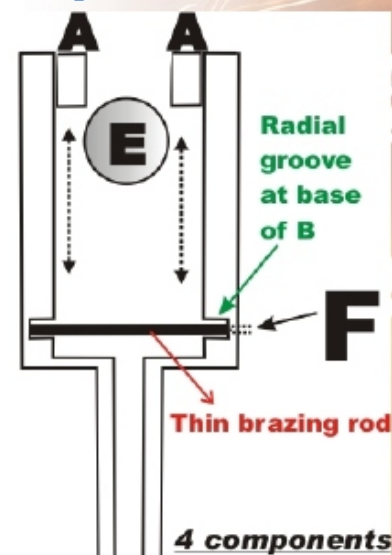
Bar C is inserted through the top (before A is glued in place) or through the side (F) and the hole plugged. It is to prevent the marble sucking the exit hole closed.

A is to stop the marble falling out the top and secondly to seal the top (using the marble) to prevent liquid syphoning in the reverse direction.



NB If using this for specific chemicals or liquid make sure there is no contamination from the material used.

D On design 2 it is not necessary to grind these half moons



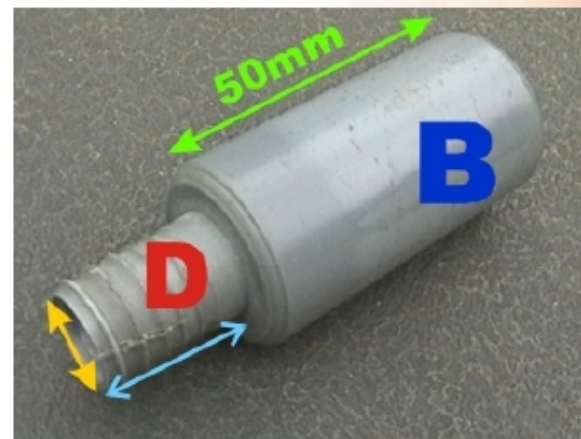
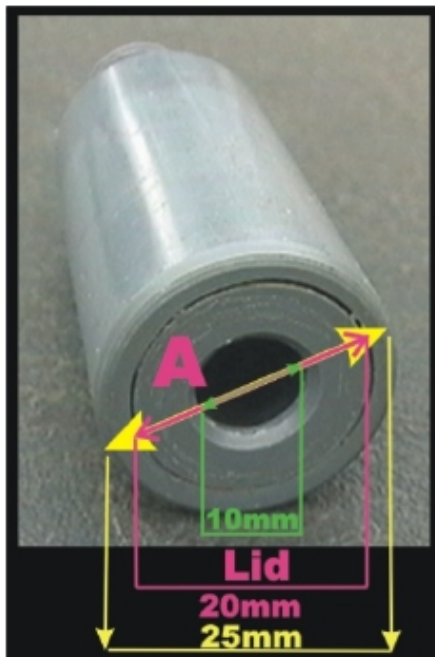
Design 1. 5 or 6 components.

DESIGN 2 continued: Using a lathe.

**Sizes are for guidelines only*

(No half moons cut into the material)

Unlike option 1, here (B) & (D) below are turned out of one solid piece of material.



Length and diameter to be decided by syphon piping to be used

9-10mm opening or as required for larger piping

Making the dimension of B to be in the region of 50-60 mm long is not a bad idea. This ensures a good distance of travel of the marble as it is shaken back and forth.

Helpful hints

Make sure enough liquid is present at the base of the container so a good stroke is achieved.

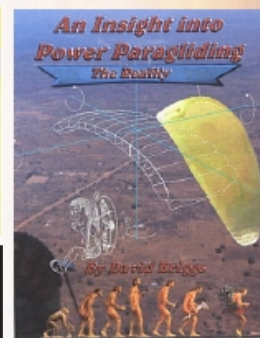
Keep shaking in smooth up and down motions until the liquid is running freely under the force of gravity.

Ensure all components are glued (with correct adhesive) eg PVC weld glue when using this material. Also ensure little or no leakage is present from the various components and no air is able to enter

Attaching the tubing When attaching the syphon tubing to the nozzle, heat the end of the tube (I usually put it in the kettle or heat gun) And leave standing until soft. This will make it easier to force over the nozzle.

When glueing components together ensure the correct glue for the respective material is being used. For eg, if PVC components are being used, then a PVC glue must be utilized.

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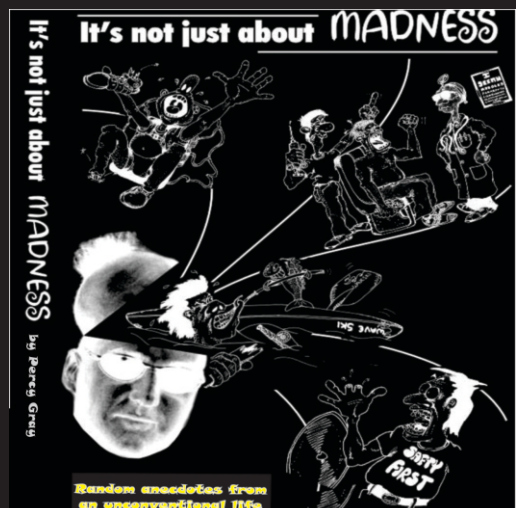


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The author has spent most of his life in a relentless quest for adventure. 'It's not just about madness' is a rollicking account of various exploits, sometimes hilarious, sometimes hair raising, told in episodic campfire-takes style, to bring-as he puts it 'some fun into our lives. So fasten your seatbelt and enjoy the raw energy of a sometimes bumpy ride with a pilot who is equally ready to face the challenge of the mighty Colorado river as to express his own frank views on the world he sees around him.

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Some time back I returned from a kayak trip close to the source of the Nile. This is the longest river in the world, travelling more than 6500 kilometres up Africa until it exits into the Mediterranean near Cairo, Egypt and is certainly high on the list of some of the most fascinating rivers I have ever paddled. It arises upstream from Lake Victoria, one of the largest lakes on this continent. So enormous in fact, it has its own tide and any water entering takes over twenty years before making its way out. From here it cascades through a hydroelectric scheme into the White Nile. (The Blue Nile, which is by no means blue, originates in Ethiopia,

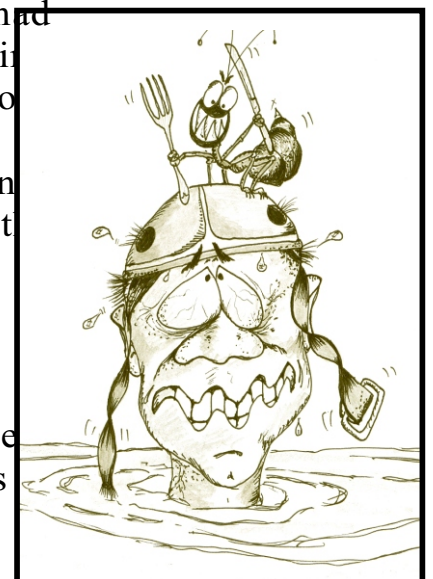


Above-Surfing a wave on the White Nile

After the confluence it loses around a quarter of its volume due to evaporation and various agricultural practices. I was on this river one day, sitting in my boat hanging onto a branch photographing another kayaker, when I felt an extremely uncomfortable feeling inside my helmet and on my arms. Looking down I was startled to see that my entire body was covered in a seething mass of black crawling ants which had originated out of the trees from their colony next to me.

These insects had clearly taken exception to this larger-than-life intruder and had unanimously undertaken to eliminate it by attempting to over-enthusiastically ingest me. I was unmistakably under siege; my ears were on fire, my nostrils itched and my head which I couldn't access appeared on fire. So the only option was to capsize in order to try drown as many of these aggravations as possible. So I voluntarily inverted myself and canoe, held my breath and hoping their need for air was considerably stronger than mine, thereby necessitating them hopefully vacating my body. After what seemed an eternity I rolled confident of at least glimpsing my original arm colour; however to no avail.

These bothersome ants now infuriated beyond all comprehension, continued to simply dig in all directions, biting everything in their way. The only alternative was to evacuate the area for a calmer stretch where any remaining steadfast could be evicted. Despite everything, a vast amount with clearly an advanced sense of survival had evaded this exercise and taken refuge inside the boat by migrating inwards. I had no option but to abandon ship and expel those which were scurrying around in an unmanageable frenzy. This blatant and unprovoked form of predation I will not forget in a hurry. My ears, arms and face continued to burn for the rest of the day as a reminder of the ferocious tiny black travelling organisms that brings misery and distress to anything coming across their terrain.



This experience underscored the strength of collaboration where the cumulative effort of seemingly insignificant tasks has a miraculous outcome when focus and teamwork are attached towards a common cause. It also highlights the 'David and Goliath' chronicle and message where no matter the size or influence of an opposition, there usually is always a vulnerability that can be exploited.