



# HYDROGROOVE

ANY BEAT ANYTIME ANYWHERE

## MYP PERSONAL PROJECT - Grooving Smart with All-in-One Water Drums

### Criteria A - Planning

#### Learning Goal

In my personal pursuit, a bold objective derived from authentic passion has fostered a gradual skill set. The mission? To pioneer the evolution of drum kits by building drummers their own all-in-one stages that uniquely transform it into a smart instrument replete with stage accessories like auditorium lights or sound systems. Initial steps to making that happen involve studying drum sounds in earnest, surveying both current technologies and an exploration of different elements. The goal while balancing all of this? Naturally, building an audience for that groundbreaking instrument. One that deftly blends its heritage with modernity, pulling back its layers without violence and securing an audience that, one day, doesn't reject the smooth marriage between timeless traditions and the cutting edge.

This personal project sprouted from my interest in Technology Hardware and Drums as an instrument. To relax I played drums as a Competitive instrument for 9 years, which developed into an urge to argue the limitations of invention and technology. previously I had faced a huge problem in my ex school, I wanted to do something creative which would awe the audience with wonders about my drumming skills so after deep research thorough determination etc I found this idea of water drums but it was not feasible on stage because obviously water ran out.. The mics got mixed up and also caused problem.Could I create a just-In interim advance drum Problem at hand in its line that is ultimately smart hassle free completely performance sure yet semi portable & enjoyable led to Hydro Groove .

#### Goal and Global context connection

**Immersed in the realm of global scientific and technological innovation, Hydrogroove emerges as a beacon of inventive drumming. It goes beyond being a mere instrument; it encapsulates a commitment to pushing the limits of percussive creativity. Aligned with the broader global context, Hydrogroove seeks to annually unveil a groundbreaking drumming marvel, aiming to address challenges and elevate every facet of the drummer's experience. The aspiration extends beyond individual improvement, envisioning a transformative impact on the drumming community worldwide, where each beat resonates with innovation, silencing criticisms and propelling drumming into a universally revered art form.**

#### PRIOR KNOWLEDGE AND SKILLS

I was extremely confused at the beginning of my project as I had a number of areas to venture into; technology, which is what I am passionate about or drums , which is my hobby. My Discussion and brainstorming session with my subject teacher and parents helped me and together

we came up with this thought on why not combine both so that I can get the chance of exploring all aspects leading me to making a technical instrument using innovative skills then after production testing it having its instruments used . As an individual well exposed in tech and owning a tech company Techranj My startup selling best pc and computers manufactured by us.I started techranj in 2018 and made a huge journey towards the realm of computers and till now i personally have built over 100 pc's and techranj is a well renowned brand in gujarat a state in india also my hometown and Me being a grade 5 drummer from trinity examination board enabling here possess significant prior knowledge and helps me as i have prior experience and knowledge to make a hydro groove a business as well as a great drumming product.

Evidence of Techranj - <https://www.techranj.in/about-5>

**Product Goal**

Hydro Groove aspires to etch its name into the annals of modern drumming history as a singular instrument seamlessly blending traditional drumming prowess with cutting-edge technology. With a focus on delivering powerful and dynamic sound kicks, it aims to stand out as an extraordinary drumming innovation. More than just an instrument, Hydro Groove envisions providing invaluable virtual assistance to drummers, offering an incredible resource for any song or track, thereby shaping the future landscape of drumming.

**Hydro Groove Success Criteria**

The traditional drums and the new technologically advanced electric drum sets both suffered from Sound with the problem of needing many accessories to just play if we see at traditional drums for them sound perfect on a stage they need professional sound system,professional speakers ,to make a show they definitely need light system whereas electric drums only needs amplifier to use it and to have a show what not,if compared with guitars or tabla it's nowhere comfortable no portability just making noise machine. Hydro Groove removes all these problems & hence became perfect performer but price is also an innovative solution in terms of drum using body heat fingertip recognition compactness portable n so makes it huge success for those drummist percussionists who are sick of traditional drums.

**Success Criteria**

Date	Success Criteria	Explanation	Testing Method
December 2023	1.The drums are made with sustainable yet high quality materials such as acrylic while withstanding the force of the drummer drumstick and equivalently sounding good.	The sustainable material makes them more eco friendly and green so no use of plastic, just metal and acrylic and the high quality skins by pearl give really good sound and make that star show in front of the audience which makes the listener want to dance on the drummers' sick beats.	The Drums sound can be checked firstly by some audience from my school like music teachers and my friends and can be checked if they like the sound or not or it can be played alongside a song to see if it matches or drags the beat into a drastic challenging problem.

January 2024	2.The drums is compact and portable making it easy to perform anywhere and everywhere	The Compact and portable drum makes it easy to take anywhere whether it be a show on the street or on the stage.HydroGroove can be disassembled and assembled within the span of 15 to 20 mins making it ready to be played.	The compactness and portability of the drums will be tested at our Lis personal project exhibition as how easy it is to transport the drums from my hometown to gurugram and if i face any issues.
January 2024	3.The drums have everything integrated in itself like lights and sound systems available on stages and auditoriums.	The all in one drum set makes it very easy to have a show anywhere anytime for anyone as it can be a disco part on the street or a professional concert on the stage with features for any need like disco lights for the street or ambient lights for stage.the drums also have a professional JBL sound system which can be helpful for all non stage performances as it can be a complete all in one system for that punch in the sound and kick in base.	This will be tested by having the drums in 3 places, a professional stage, a small auditorium and a street with drums being operated by a ming generator which will lead to seeing if hydro groove really sticks to the line anytime and anywhere.
	4.The drum is a comfortable instrument for the musician/Drummer to play or perform and does	The drums should be comfortable for the drummer to be playing as if it is not comfortable and one miss stroke or a	This will be tested by taking inputs and opinions from school percussion and instrument teachers

December 2023	not have any issues with its positioning	missed beat leads to the whole song going down for a spin and leading the audience to throw Tomatoes.	about the positions of the drums and if the position is perfect or needs to be changed which can be a good impact for the
			HydroGroove.
January 2024	5.The drums are full of enjoyment and entertainment with features like water mode and light modes for something unique and to capture that crazy moment.	The drum has water modes for entertainment and that always ready drummer showdown.The water modes are on the speed of the song the fast songs have fast flow of water so that the fashing waves of water could go up and make a show or for those slow folks with lateback songs there is slow water mode just for enjoyment and the goodness of the punch in the drums.	This can be tested by audience feedback if they enjoyed the wondrous and the performance Hydro groove vigorously and having fun with the all in one system and the modern technology with the water modes.

## ACTION PLAN

Task	Description (Why)	Steps (How)
To build the basic floor toms as the main instrument of the drums	The floor toms is the basic structure of the drums every single thing added will be either mounted on the drums or integrated in it.	The basic wood cylinders will be cut from professional woodworkers and given to me.I will prime coat them and attach the custom ring and the plastic sheet made and get the basic playable drum set ready.For stability and durability aluminium rods will be attached to the drums and making it a complete basic instrument to play

<p>To build a professional sound system integrated in the drums with amplifier mixer and dj system all integrated and connected with the virtual assistant.</p>	<p>The sound system will be a crucial part as the drums sound will be thrown by these speakers to the audience making a amazing performance whenever the drummer wants with the sound system</p>	<p>The drums will have a partition in between so half of the drums is the instrument and half is the speaker and circuitry for it. The bottom half will have a hole cut in the size of the speaker and attached in it and all the circuitry in the cylinder connecting externally with the amplifiers and mixer systems. all the wires and electronics will be hid internally so that the drums does not look messy with having the best sound system like a stage performance.</p>
<p>To Build a amazing light system like in our school auditorium with rotating lights, disco lights and ambient lights responsive to the sound of the drum or with modes preset.</p>	<p>The light system is the audience catcher of Hydro Groove for an amazing show with drum sound reactions or preset modes like disco lights or ambient light all connected to a control panel available to the drummer. This light catches attention and audience quickly and turns them into party monsters or dance machines.</p>	<p>The support rods of the drums will be welded by external 4 lods making a complete railing like system for the lights to be on and not disturb the drummer while playing. These lights will be movable and auto rotatable facing the audience at all times. The light wires will go in the metal rods and come out connecting to the control panel of the lights and not having a messy look. There will be total of 8 lights 4 being rotatable multi mode lights and 4 ambient support lights.</p>
<p>To build a complete virtual assistant to control all sound and lights and also support the drummer with songs, beats or music.</p>	<p>This virtual assistant will make the drummer's performance very easy just by telling the virtual assistant what to do and set up the performance as per the song and place.</p>	<p>The virtual assistant will be a diy alexa mini project having external abilities to also control lights as per the sound.</p>
<p>To build the drum compact and comfortable and aesthetic friendly</p>	<p>The drums should be comfortable so that it does not make an issue while playing and create a bad representation of hydro groove not being comfortable while playing, but compact so it can be played anytime and anywhere, and finally aesthetic friendly so that it does not look messy and ugly.</p>	<p>The drums position will be in a way that it easy to reach all the floor toms easily placed in a curve format. The compactness will be made by everything in the drums be detachable and durable so it doesn't break and all fit in one suitcase. The paint the wires and the systems will be all neat and hidden so it does not intervene with the look of the drums.</p>

## **Criteria B - Applying Skills**

### **LEARNING GOAL**

This course has been a substantial exploration of research and strategic initiatives, steering Hydro Groove's evolution from an exploration of sound dynamics to the meticulous integration of structural design, technical mechanics, and sophisticated lighting systems. My success criteria serves as the compass, guiding this transformative journey and crystallising expectations for the ultimate product. Emphasising a Helix-centric methodology, the plan intricately maps out milestones, while the accompanying activity list for each phase ensures a detailed approach. Within these actions, a deliberate effort has been made to brainstorm alternatives, fostering adaptability and smooth transitions, thereby mitigating potential errors along the intricate pathway of development.

## ATL SKILLS - RESEARCH SKILLS

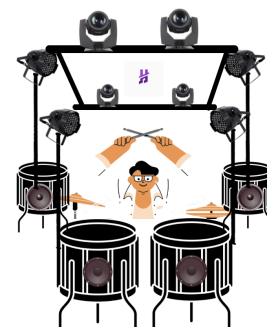
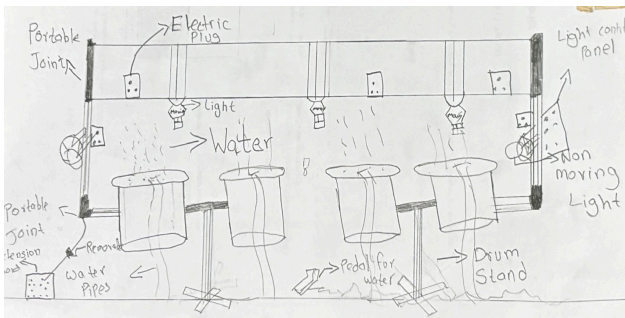
The guidance provided was instrumental in structuring my research stages effectively. For instance, my initial exploration focused on the Hydrograph view market for drums, offering a foundational understanding of drum basics. This search not only facilitated a grasp of fundamentals but also yielded valuable resources, streamlining the research process. Engaging with a multitude of primary sources, including interviews and online materials, I refined my arguments. The OPVL approach guided me in discerning relevant and reliable sources, ensuring a balanced mix of secondary and primary information. Emphasising credibility, I prioritised sourcing from experts, particularly a drum kit company owner, whose insights enriched my understanding. This meticulous approach enabled me to compile reliable information and broaden my comprehension of drumming instruments, paving the way for the practical manifestation of HydroGroove.

### Research Plan

<p><b><u>Research Question</u></b></p> <p>How does the integration of modern technology in HydroGroove revolutionise traditional drumming and have an impact on the instrument industry with all in one integrations.</p>	
<p><b><u>Complementary Questions</u></b></p> <p>What is the best drum available in market          What is the audience for this type of instrument          What innovative features hydro groove has compared to other traditional drums          Which is a competitor of hydrogroove or similar to hydro groove (if any)</p>	
<p><b><u>SOURCES</u></b></p>	
<p><a href="https://www.mojo4music.com/recommends/audio/best-drum-kits/">https://www.mojo4music.com/recommends/audio/best-drum-kits/</a></p>	<p>This source comprehensively presents and elucidates the top drum kits of 2023, offering profound insights into consumer preferences and highlighting the features that define the best drums. Renowned among drummers, the website not only delivers music and recommendations but also extends a newsletter accessible to all interested individuals.</p>
<p><a href="https://naivri.com/products/electric-drum-with-built-in-speaker">https://naivri.com/products/electric-drum-with-built-in-speaker</a></p>	<p>The source has a product of an electronic drum with inbuilt speaker. The source is an e-commerce gift store. Though after viewing the product in detail I found it invalid and clickbait for drummers and</p>

	<p>drummer as the drumkit is basically a toy or a knock off version of a drum game and the speakers are also horrible with very bad sound quality.the drums are just for fun and not for professional drummer</p>
<p><a href="https://www.youtube.com/watch?v=WwKis1vek0U">https://www.youtube.com/watch?v=WwKis1vek0U</a></p>	<p>The source is a video of the channel Adafruit Industries,the channel is reputed with over 400,000 subscriber and verified by youtube.The video showcases how to mod a acoustic drum kit with lights and make it react to sound.The source gives a good idea of making acoustic drums into sound reacting light up drums though the application of this is very impractical leading to each and every part of the drumset and applying the lights and soldering into circuits, though this may not be know by a common man and can be very tedious.Hydro Groove will have external lights place which are easy to remove attach or replace, just remove two screws and disconnect the cable.</p>
<p><a href="https://www.groovenexus.com/learning/8-steps-to-mic-a-drum-set-for-live-performance/">https://www.groovenexus.com/learning/8-steps-to-mic-a-drum-set-for-live-performance/</a></p>	<p>This is a web page which provides a guide on micing drums in a live show. This source is very reliable, and it could have influenced Hydro Groove. All information is clearly outlined, thoroughly discussed.Earlier hydro groove sound system did not have proper microphones though.that’s why with this source now hydro groove has decent quality mics.</p>
<p><a href="https://illuminated-integration.com/blog/stage-lighting-101/#:~:text=The%20idea%20is%20to%20match,are%20associated%20with%20different%20moods.">https://illuminated-integration.com/blog/stage-lighting-101/#:~:text=The%20idea%20is%20to%20match,are%20associated%20with%20different%20moods.</a></p>	<p>This source contains an article that shows the best stage lighting (lighting for performance).Hydro Groove also has a feature integrating its drums.This site depicts other types of lights or lighting modes not meant for hydro groove.</p>

**ROUGH SKETCH ( HAND DRAWN AND DIGITALLY FOR CLEAR UNDERSTANDING OF FINAL LOOK)**



**APPLYING SKILLS - SELF MANAGEMENT SKILLS - (iii.Organization skills)**

During this project, the one skill that I developed extremely well was self-management. At the beginning, I knew that my product was ambitious but then I had the motivation and self-motivation to finish it. During this time, which I spent to complete my entire project of about 5 months with other academic and extracurricular obligations faced in school, it was imperative as it demanded proper management for satisfactory completion. After that, HYE came along and we had to give in the product and report as well. This only added sleepless nights plus hard work into my schedule which was very tough for me but boosted my self management skills a lot. I learned that time is a very important thing. I listened to speeches or motivation music which gave me the motivation or resilience to work on my project.

### **PLAN TO ACHIEVE THE PRODUCT**

The comprehensive timetable meticulously records everything, from the first encounters with managers to detailed entries in the performance diary. Each scheduled step had been rigorously implemented, resulting in the successful realisation of the hydrogroove product. The meticulous record details a journey well planned and full of achievements from idea to implementation.

### **HYDRO GROOVE TIMELINE**

<b>12 DECEMBER 2023</b>	Product structure and visualising
<b>15 DECEMBER 2023</b>	Product discussion with specialists
<b>20 DECEMBER 2023</b>	The journey Starts
<b>22 DECEMBER 2023</b>	Building the drums
<b>23 DECEMBER 2023</b>	Assembling drums and make them sound good
<b>25 DECEMBER 2023</b>	Initiating work on water mode
<b>27 DECEMBER 2023</b>	Water mode testing
<b>2 JANUARY 2024</b>	Structure formation welding
<b>3 JANUARY 2024</b>	Structure painting and primer
<b>5 JANUARY 2024</b>	Lights search and buy
<b>6 JANUARY 2024</b>	Electrics and lights work
<b>7 JANUARY 2024</b>	Electrical testing
<b>9 JANUARY 2024</b>	Drum Waterproofing
<b>11 JANUARY 2024</b>	Drum Sound Search and buy
<b>12 JANUARY 2024</b>	Drum Sound system Installation
<b>13 JANUARY 2024</b>	Product rigorous testing
<b>14 JANUARY 2024</b>	Video and drone shoot
<b>15 JANUARY 2024</b>	Drum Transport to School



## OPVL Evaluation of source

Source	Origin	Purpose	Value	Limitations
Mojo4Music <a href="https://www.mojo4music.com/recommends/audio/best-drum-kits/">https://www.mojo4music.com/recommends/audio/best-drum-kits/</a>	Mojo4Music website	Showcasing best drum kits and consumer preferences	In-depth knowledge on drum kit features; reputable source	Subjective consumer preferences
Naive <a href="https://naivri.com/products/electric-drum-with-built-in-speaker">https://naivri.com/products/electric-drum-with-built-in-speaker</a>	Ecommerce gift store	Promotion of an electronic drum with built-in speaker	Misleading, offers low-quality product not suitable for professionals	Lack of credibility, potential misrepresentation
Adafruit Industries <a href="https://www.youtube.com/watch?v=WwKis1vekOU">https://www.youtube.com/watch?v=WwKis1vekOU</a>	Adafruit Industries YouTube channel	Tutorial on modifying acoustic drums with lights	Creative idea but impractical for most users; complex modifications	Complexity might limit practicality for average users
GrooveNexus <a href="https://www.groovenexus.com/learning/8-steps-to-mic-a-drum-set-for-live-performance/">https://www.groovenexus.com/learning/8-steps-to-mic-a-drum-set-for-live-performance/</a>	GrooveNexus website	Article on miking a drum set for live performance	Detailed guide for live performance miking; potential influence on Hydro Groove's mic system	Focuses more on live performance settings
Illuminated Integration <a href="https://illuminated-integration.com/blog/stage-lighting-101/#:~:text=The%20idea%20is%20to%20match,are%20associated%20with%20different%20moods.">https://illuminated-integration.com/blog/stage-lighting-101/#:~:text=The%20idea%20is%20to%20match,are%20associated%20with%20different%20moods.</a>	Illuminated Integration website	Article on stage lighting techniques	Insights into stage lighting and performance effects	Primarily focuses on stage lighting, may not directly address drumming instrument needs

## Criteria C - Reflecting

### Significance of project on my learning

Initially, I thought creating the perfect drum instrument was a guaranteed success due to market demand. However, deeper exploration revealed challenges, with no successful all-in-one drumming solutions compared to giants like Tama or Pearl.

Facing this reality, I recognized the need to make my dream a reality through dedication and hard work. The journey transformed me, reinforcing my conviction in the creation as I reflected on its diverse aspects. The culmination brought deep personal meaning, impacting my growth and understanding of the science behind technology and instruments. Today, it extends beyond technicalities to encompass financial recognition, competitor awareness, global collaboration, and innovation within the context of scientific and technical progress.

### In depth knowledge of global context

**In envisioning the future, my all-in-one and intelligent drumming initiatives promise a global revolution, seamlessly blending traditional and modern percussion. This surge in scientific and technical innovation is set to usher in a new era of musical instruments. Within this global context, Hydrogroove emerges as a potent force, capable of redefining the entire drumming instrument domain. To achieve its zenith, a professional touch is imperative, transcending the prototype stage to become a market-ready marvel. In the hands of a proficient company, Hydrogroove stands poised to reshape the narrative of drumming instruments, forging a path where innovation and tradition harmoniously converge. The prospect is both thrilling and promising, painting a vivid picture of a musical landscape yet to be explored.**

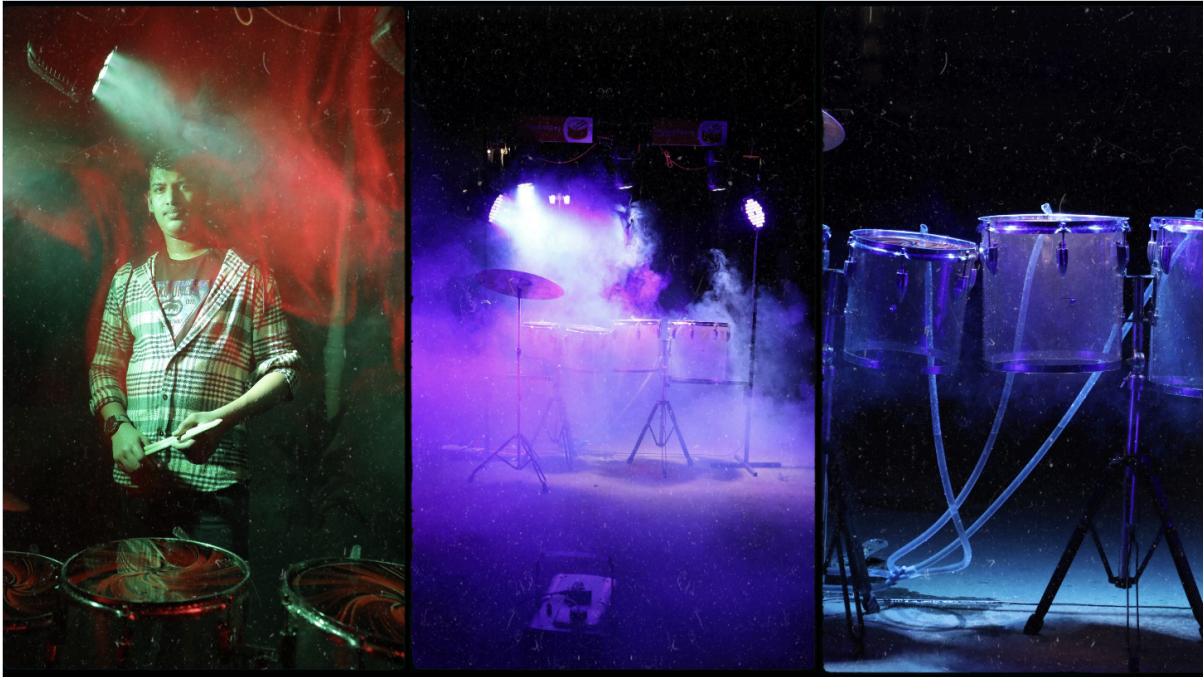
### **What challenges were faced and solutions were developed**

The most formidable hurdle in drum craftsmanship transcended the bounds of academic inquiry, thrusting me into a realm where my principles faced contradiction. As I grappled with how to weave this discord into my work, a tapestry of diverse perspectives on existence unfolded before me, revealing the dearth of objective data to conclusively endorse one approach over another within a comprehensive system. This revelation crystallised during a dialogue with my high school design teacher, who imparted the wisdom that perfection need not be absolute; a measure of research was an indispensable companion to innovation. In response, I orchestrated an experiment deploying all-in-one drums, not only to catalyse further discourse in the technological innovation domain but also to scrutinise the validity of this conceptual framework. While unanimity may remain elusive in embracing this perspective, an intrinsic truth underlies it. The presumption that unwavering accuracy ensures infallibility crumbles in the face of the reality that all research is inherently an odyssey of trial and error. Illustrating this nuanced approach are the Hydro Groove drumming instruments, shining forth as paragons of excellence in harmonising the precise with the experimental. Amidst the symphony of creation, they emerge as testaments to the intricate dance between meticulousness and daring exploration.

### **My Future Learning**

My future learning with this project is very vast from creating better design thinking skills to having improved technical skills. It thus implies that perhaps, someday I would have to use it in my line of work which entails a lot of research. Then again, upon embracing this new self-management procedure, I reacted so fast due to the fact that I did not have to strain myself a lot. This personal well-being had done leaps to improve my concentration, focus, learning ability, and general focus, which would definitely assist me from now onwards until the rest of my life in order to efficiently gain knowledge and push me through my learning, as I believe that learning never ends for as long as one lives.

**FINAL PRODUCT - (Video - [https://www.youtube.com/watch?v=\\_y10bf0pfn0](https://www.youtube.com/watch?v=_y10bf0pfn0))**



## PRODUCT EVALUATION

The intricacies of drum craftsmanship didn't align with conventional academic inquiries; rather, they presented a clash with my core principles. As I contemplated the integration of this aspect into my work, a landscape of diverse perspectives on existence unfolded before me. The absence of concrete data to definitively champion one approach over another in a comprehensive system became evident. My high school design teacher's counsel, advocating for necessary exploration over absolute accuracy, echoed in my mind. In response, I embarked on an experiment employing all-in-one drums to not only prompt further discourse in the realm of technological innovation but also to assess the validity of this conceptual framework. While this perspective may not find unanimous support, there lies an intrinsic truth in it. The assumption that a heightened level of accuracy guarantees correctness is inherently flawed, given that research is an iterative process fraught with trial and error. Epitomizing this approach are the Hydro Groove drumming instruments, standing out as paragons of excellence in navigating the delicate balance between precision and experimentation.

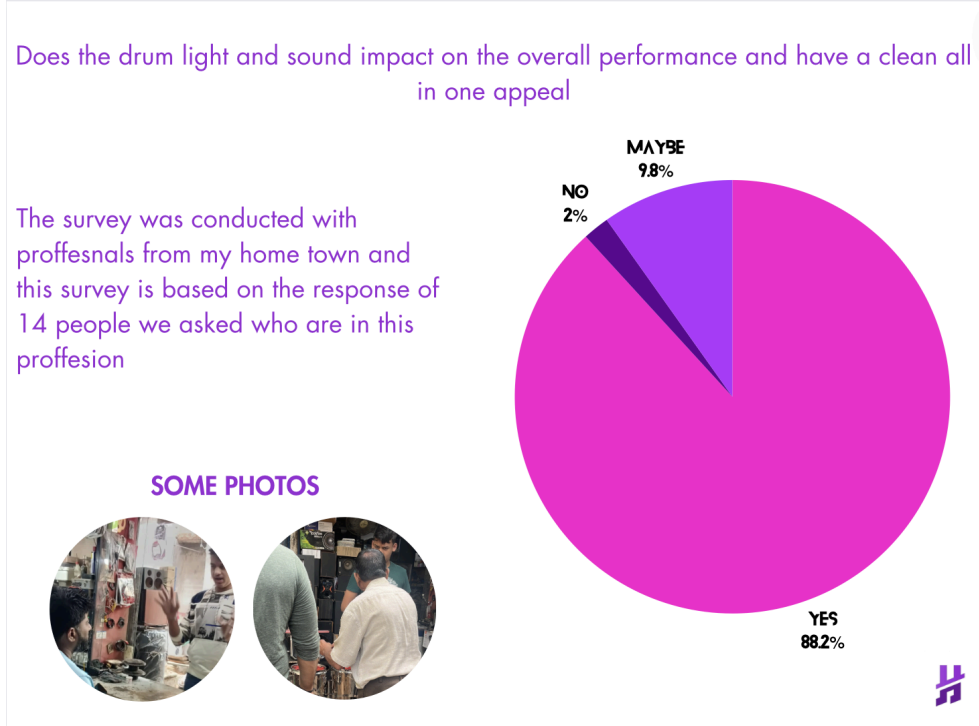
### Limitations of atl skills

The research skills provided all the explained benefits above but had their limitations. In some instances, it was difficult to get non-data information on smart drums. Some of the information available was either difficult to find or it pertained to the future but not what was happening in today's life. Studies by professionals with valid information on the subject were not available or existed because of the high purchase costs. However, even with several-sourced, OPVL-evaluated materials it was hard to identify the source's validity that may cause my incorporating false data into the project. That would have an effect on my self-learning and eventual product, which is a drum where inaccurate information will be distributed. Also, my research could become outdated due to new research and studies; information changes over the years thus what I collect during this search might be different that what is known about drumming instruments in a few years time. The project is not long enough to establish changes in information, as well as a possibility for the trend identification to amend my knowledge on the issue. In addition, researching affects my ability to think critically. For example, after obtaining opinions on contentious issues such as which drumming instruments exist or not, I may eventually depend on the opinion that I receive thereby

compromising my capacity to independently analyse and interpret information regarding drumming instruments for my own research through factual and conceptual findings. Nonetheless, subjectivity in the findings of my research would reduce since I would have other options besides my own as subjects and hence increase objectivity.

**EXCERPT FROM SURVEY-(Click To Enlarge)**

The survey was conducted with professionals from my home town and this survey is based on the response of 14 people I asked who are in the drumming and light and sound industry from profession



**PRODUCT EVALUATION**

Level Given By me (out of 8)	Aspect	Strengths	Success Criteria	Weaknesses
Level 7	Light and sound systems	<p>Exceptional audio quality.</p> <p>Best for a drummer if he wants to play songs and play drums together and control the voice from the mixer.</p> <p>Amazing light effects give life to the drums.</p> <p>Make a amazing show</p> <p>The lights and sound both are the best in their own ways.</p>	No.3	<p>The Lights are water resistant not waterproof nothing will happen soon though in the long run after excess use the drummer may need to change the light</p> <p>The sound is amazing though the output has to be kept a little low above full otherwise if the mic gives excess input to the speaker the speaker can get damaged.</p>

Level 6	Sound Quality from the drums	<p>- Superior and authentic drumming sound It brings a real feeling of performance like professionals. The drums have accurate complete adjustments also if the drummer wants to try something different</p>	No.1	<p>- In a limited or specifically tailored tone. Some other brands may lack a provision to choose selectable sounds for different types of music.</p>
Level 6	Drum smoke effects and water mode	<p>Very good to perform a show any time anywhere</p> <p>The water mode is a good unique mode which the drummer can reveal to the audience to engage them in his performance</p> <p>The drum gets live after the smoke is put on it and also can be good for night shows.</p>	No.5	<p>The water mode will not leak through excess water in the drums may lead to falling of water which may cause harm to the electronic wire or any open circuits</p> <p>The smoke smell can be irritating as excess is not good</p>
Level 6	Comfort, Portability and Sturdiness	<p>The drum has checked the box of portability after a trial by transporting it from my hometown Vadodara to gurugram. Not only did it fit in 2 boxes, it also came without a scratch.</p> <p>The comfort is also amazing and there is not problem playing whatsoever any beat can be played anyway and it is comfortable</p>	No.4	<p>The sturdiness is there though when the drum is being played and hit hard the structure may move a little as too much weight is there of lights, sound drums and mounted things on the drums.This can be avoided by placing bricks or heavy things on drum stands.</p>

## COMPLETE OVERVIEW

### STRENGTHS

Hydro Groove has been a huge success and has mostly accomplished every single thing which was planned for. The drum lights have got that nice look on the drum matching hydro groove theme as well as modes for subtle or hardcore parties and being beautiful looking and how the placement has worked out is really good. Hydrogroove's

sound system is beyond exception no doubt it is from JBL and there was no question that would not sound good and it is working as expected, the drum's sound is also amazing that pearl drum skins has done the job fabulous and give that punch while playing. Hydro Groove also took my expectations one step ahead as when all of the features come together the drumming game goes to another level. Overall Hydro Groove is an amazing product and it is so good that people want to buy this and rent it. I am very proud of what I have accomplished and thank you for giving me this opportunity in the form of personal project.

## WEAKNESSES

Well nothing is perfect in life right, Hydro Groove also has some ups and downs but after some tweaking and turning it can transform into a perfect piece of drumming equipment anyone can play anytime anywhere. The water issue can be a bit troubling as excess water leakage may cause some issue for the drummer though except that I think that Hydro Groove just needs awareness. The drum can change the drumming industry and also say goodbye to all old heavy drums needing extra equipment to make a show Hydro Groove is here and there is no problem anymore.

## CONCLUSION

Hydro Groove is finally after 6 months of planning strategizing building and learning has come to an end the product is more better than my expectations and may have just changed the drumming industry completely perfect for any drummer or DJ's who want to make a show and bring their drumming game up a notch. Hydro Groove has been fun tiring and frustrating though the journey has made me learn that if a person never backs down and finishes what he wants to accomplish a greater product can be made than expectation.

## FUTURE PLANS FOR HYDRO GROOVE

I am not done with Hydro Groove yet. I have started a new company only for India for now to sell and rent Hydro Groove for shows performances or for drummers and make Hydro Groove the go-to drumming instrument and according to people choices and budget the drum skins lights and sound systems can be customisable. The drum will have 3 prebuilts starting from 1 lakh equivalent to 1200 dollars it may be expensive for you and me though for DJ's and drummer a simple sharpie light is 900 dollars or a professional drumstick nowadays is 200 dollars and if someone wants to really buy it that is why we have customisable options doing our best to set the drum in their budget. Custom drums will be delivered within a month a prebuilt order within 15 days. I am still a school student though this balance between my startup and school will teach me a lot and make me balance my attributes with real life skills making me maybe a successful person in the future.

## EXCERPT FROM PROCESS JOURNAL

The screenshot displays a digital workspace interface. At the top, there are three tabs: 'Workspace', 'Journal' (which is active and highlighted with a blue border), and 'Meetings with Supervisor'. Below the tabs, the 'Journal' section is visible, featuring a search filter and an 'Add Resource' button. Two journal entries are listed:

- Entry 1:** Posted by Heeranj Gupta on Jan 24, 2024 at 10:19 PM. Tags: Research, Self-Management, Thinking, Product. Title: 'Product show to supervisor and pp coordinator'. Content: 'Presented final product of personal project to both PP coordinator and supervisor for their review.'
- Entry 2:** Posted by Heeranj Gupta on Jan 24, 2024 at 10:18 PM. Tag: Communication. Title: 'Supervisor Meeting'. Content: 'Meet with supervisor and review on the report and changes in the report. Scheduled meeting with supervisor to review report and discuss changes.'

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