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RESEARCH PAPER

Redefining Workspaces for Freelancers and Influencers on the Go

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ABSTRACT

This study designs a portable and ergonomic workstation tailored for nomadic freelancers and digital professionals, specifically addressing usability and health-related needs during mobile work. The rise of remote and freelance work has led to a mobile lifestyle, where individuals frequently travel for short-term projects. However, traditional workspaces do not support their ergonomic needs, often forcing them to work in non-ideal settings such as beds, couches, or public spaces. This compromises comfort, health, and productivity. This study adopts a qualitative research approach. Data was gathered through observational analysis and semi-structured interviews with remote freelancers aged 22–35. The population included participants working in design, content creation, and tech-based fields. Thematic analysis was used to identify patterns related to workspace challenges and ergonomic requirements. Findings reveal a consistent demand for a compact, foldable, and adjustable workspace that accommodates posture variation, tech integration, and storage. Most users linked poor setups to back, neck, and wrist strain. This study recommends to design a lightweight, modular workstation supporting both sitting and standing postures. Incorporate tech-friendly features and ergonomic adjustability to ensure long-term user comfort.

KEYWORDS Workstation, Modular, Working Environment, Ergonomics

Introduction

A person who travels around the world and work remotely using information and communication technology e.g Internet is known as Digital Nomad. By the increase of gig economy many people shifted towards remote work. According to the survey a rough count of 11% of the U.S. workers those are about 18.1 million Americans – now classify themselves as digital nomads who work remotely while traveling. This increase reflects not only change in types of jobs available but a greater shift in people perspective on work and personal autonomy. Because of this many organizations adopt remote work policies. Moreover, many organizations are implementing remote training, flexible scheduling and improved legal assistance to assist whit these changes. These mobile professionals are typically younger: a recent study reports the median age of digital nomads is 37 (64% are Gen Z or millennials) (Chim & Chen, 2023). Due to increasing number of remote and hybrid work models, many young and talented workers are opting independent-work.

Due to the normalization of hybrid work models the need for portable, ergonomic and modular work arrangements has increased which has been further accelerated by the COVID-19 pandemic (Yaseen, et. al., 2020).As we all know traditional workstations and furniture are heavy, bulky and not suitable for work and travel lifestyle. This is a major reason when freelancers work while travelling they compromise on their health, work efficiency and posture. A 2024 report estimates that almost 18.1 million Americans

are digital nomads, a 131% increase from 2019. This surge is attributed to advancements in technology, the desire for flexible work arrangements, and the global shift towards remote work, accelerated by the COVID-19 pandemic. ("Digital Nomad,"-2025)

This thesis fill the gaps by offering a workstation that provide ease to travel freelancers by incorporating features like ergonomic support (adjustable lumbar and neck support), portability (a workstation that doubles as a travel bag), and functionality (smart integrations like wireless charging and modular storage), this thesis fills this gap. This project aims to directly address the issues faced by modern freelancers, particularly those between the ages of 20 and 30 who frequently switch workspaces in order to improve their comfort, health, and productivity through human- centered product design.

Literature Review

Freelancers and Influencer

Without customized workspaces, they frequently face challenges related to productivity and physical discomfort. (Alipoor et al., 2021). Their varied work environments—which range from home offices to co-working spaces and travel settings—highlight the necessity of ergonomically built portable solutions.

In order to meet the demands of content creation, influencers need workspaces that successfully blend functionality and aesthetics. Portability of equipment, ergonomic editing designs, and aesthetically pleasing layouts appropriate for filming and branding are essential requirements. Because of their traveling schedules, they have a clear need for workstations that enable professional productivity wherever they are.

Both target groups prioritize mobility, flexibility, and ergonomic optimization, underscoring the demand for innovative workspaces that address diverse, task-specific needs.

Workstation

A workstation is an area set up to accomplish specific tasks. Its design and equipment should reflect the activities designated to be performed there and accommodate the ergonomic requirements of the operator so that productivity and comfort are ensured.(Mariana et al., 2023a). Workstation types vary depending on the profession, which highlights the necessity of adapting the workspace to meet industry-specific requirements. The industrial processes and functions of the work area or station must be reflected in its design. We can classify workstations according to posture and function:

Sitting Workstations: Ideal for occupations involving extended durations of sitting.

Walking Desk: Give the option to work while walking, which can reduce fatigue.

Pedestal Stool Workstations: Perfect for occupations that require partial support and movement. **Standing Workstations:** Designed for tasks that requires frequent movements.

Work Environment Factor Work environment can effect human comfort, productivity and creativity. Some of the significant factors that determining the effectiveness of the workstations include:

Physical Ergonomics

Workstation designs should be improved to accommodate the natural position and movement of the human body.(Mariana et al., 2023b) The installation of adjustable equipment, optimal arrangement, and posture-supportive furniture minimizes mechanical injuries thereby reducing ergonomic risk. Poorly designed spaces that require long periods of sitting, slouching, or excessive reaching can contribute to back problems and increased absenteeism.

Lighting

Lighting has a lot of effect on productivity whilst performing. There should be a consideration for both the strength and colour of light in order to ensure that eyes are relaxed and efficient work conditions prevail. Workplaces where changing work environment is the situation, light changeable elements are useful.

Noise Levels

In projects that require deep concentration or great deal of tasks that need much communication such noise can be detrimental. Portable workstations should incorporate noise control or isolation in order to improve productivity.

Temperature and Ventilation

Both, the psychophysiological aspects of the human being and his input have a great impact in terms of ambient temperature and air quality. The comfort features aimed at dissipating heat and the use of materials which facilitate breathing in physically demanding modalities of work also make the work experience more pleasant.

Interior Color

Colour have a relatively profound effect on the predetermined perception and the satisfaction of the psychological needs of individuals. Relaxation tones may help in eliminating stresses during work while other brighter colour may increase the desire to work in the sphere of creativity.

Safety and Control Systems

User safety, which in a delicate sense may be at the heart of the activities, is ensured by effective design, sturdy structures, anti-skid bases, and simple adjustments. Naturally, safety concerns are crucial for all professionals working in unfamiliar or quickly evolving environments.

Physical Ergonomics In Portable Workspaces

Incorporating physical ergonomics in workspace design will have a dual impact on the user's health and productivity.

Ergonomic Features Significance

In portable workspaces, adjustable angles, optimal seating support, and suitable work surface heights can be provided to minimize the strain. There is substantial evidence that shows ergonomic configurations enhance work performance and alleviate fatigue over a long duration of work.(Chim & Chen, 2023) The dynamic nature of on-the-go work demands features such as foldable components, lightweight structures, and modular adaptability. For instance, adjustable laptop stands and cushioned wrist supports help in solving long-term typing needs by promoting healthy postures.

Modularity and Portability

Modularity can reconfigure components with the user's present task. For traveling professionals, a modular setup helps realize specific tasks on the job without clutter. For example, detachable storage units for equipment to film, laptops, or writing supplies make the workstation both flexible and tidy.

The compact workstations' design focuses on lightweight but strong materials. Features such as collapsible legs, fold-out tables, and integrated carrying options make users more mobile without losing functionality.

Market Analysis And Gaps

While there are so many portable workstations, many of them fail to fit the specific needs of freelancers and influencers.

Limitations in Current Solutions:

- Less ergonomic comfort for long periods of use.
- No flexibility for certain types of work, such as filming, content production, or high level designs.
- Either too bulky or too minimalist, failing to find a balance between functionality and design.

Material and Methods

This section illustrates research methodology used to create the matrix of an ergonomic, folding, and portable work-station suitable for digital nomads and freelancers of the ages 20-45. The study includes both qualitative and quantitative methods to have the full picture of the user needs and ergonomic requirements. The design begins with the choice of methodology, followed by the recruitment of participants, development of the instrument, the steps, analysis of data, and ethical consideration.

The methodology includes:

- Surveys to gather broad data
- Interviews for in-depth perspectives
- Case studies to explore real-world applications
- User observations to see how workstations are used in practice
- Data analysis using SPSS for statistical insights

This comprehensive approach ensures a well-rounded understanding of the target audience's needs.

Research Design

A mixed-methods approach involved the use of both qualitative and quantitative research methods to obtain a deep understanding of the ergonomic challenges met by nomads and freelancers. This strategy makes the study more user-centered through interviews and at the same time allows the measurements of the ergonomic risk factors to be numerical.

Qualitative Component

Semi-Structured Interviews: Conducted with 20 digital nomads and freelancers, the interviews' goals were the discovery of the respondents' habits, difficulties, and preferences regarding mobile workspace.

Observational Studies: Field observations were conducted in a wide variety of remote work locations (cafes, co-working spaces) to reveal basic ergonomic problems and the actions that people take in such situations.

Quantitative Component

Surveys: The survey of 100 respondents determined the actual situation of musculoskeletal discomfort and the considerations on available portable workstation solutions.

Ergonomic Assessments: The RULA, Nordic Body Map, and other standard methods were used to assess the severity of musculoskeletal disorders, which can be provoked by sitting in a wrong position.

Research Design

This research adopts a Convergent Parallel Mixed-Methods Design, a methodology well-suited to studies requiring both quantitative ergonomic assessments and qualitative user experiences. The goal is to achieve a comprehensive understanding of how ergonomic risks relate to perceived discomfort and user preference in the context of mobile workstations.

Research Strategy: Convergent Parallel Mixed-Methods

The convergent parallel mixed-methods approach was selected due to its robustness in collecting and analyzing qualitative and quantitative data concurrently but independently. In this design:

Interviews (subjective data) and ergonomic evaluations (objective data) are collected at the same time but through separate instruments.

Both data sets are analyzed independently.

The findings are then merged during interpretation, allowing for validation and comprehensive insight.

"This approach allows researchers to verify each other's findings and ensure that their conclusions are supported by both numerical data and observed behaviors" (Creswell & Plano Clark, 2018).

Rationale for Mixed-Methods Use

The rationale behind using this mixed-methods design lies in the duality of the research focus:

On one hand, we assess user perceptions of comfort, flexibility, and mobility, which are inherently subjective. On the other hand, we use objective ergonomic risk assessment tools like RULA (Rapid Upper Limb Assessment) to quantify posture-related risks. This dual lens is essential in product design research, where perceived comfort may not always align with actual ergonomic safety.

Triangulation and Data Interpretation

Once data from both methods were analyzed, findings were triangulated to validate or contrast the results:

For example, if a participant reported low discomfort in the survey, but RULA showed a high ergonomic risk, it raised questions about awareness levels or normalization of discomfort.

Conversely, if both self-reported discomfort and RULA scores were high, it confirmed the severity of the ergonomic problem and validated the need for design intervention.

This fusion of results helps identify hidden contradictions, cognitive biases, or training gaps in ergonomic awareness among users.

Advantages of This Approach

Comprehensive Understanding: Captures both how users feel and what is actually occurring biomechanically. Reveals Cognitive Gaps: Highlights whether users are aware of or ignoring ergonomic risks. Design Validation: Enables the validation of design decisions from both technical and experiential perspectives.

Study Limitations

The RULA analysis is limited to static postures, whereas many digital nomads change their positions frequently. Interview and survey results are subject to bias, particularly recall bias when participants describe past discomfort. The sample size, while adequate for exploratory research, may limit generalizability.

Participants

Participants were chosen for the study using purposive sampling, a process by which subjects are selected based on the matter at hand in the research. In the case of this study, the chosen participants were digital nomads and freelancers who are used to work in places, not an office, and are also more likely to be affected by ergonomic issues.

Total Sample Size

A total of 120 individuals took part in the research, with 20 of them being interviewees and the rest (100) survey participants. A few participants were in both groups, meaning that they were both surveyed and interviewed. Inclusion Criteria: The

participants of the experiment were chosen based on the following requirements: Being in the age range of 20–45. Stating that they are a digital nomad or a freelancer. Possessing at least 6 months of experience working in non-traditional environments (e.g., cafes, co-working spaces, hostels, etc.). Being eager to provide pictures of their workstations for ergonomic assessment. Being in the age range of 20–45.

Stating that they are a digital nomad or a freelancer. Possessing at least 6 months of experience working in non-traditional environments (e.g., cafes, co-working spaces, hostels, etc.).

Being eager to provide pictures of their workstations for ergonomic assessment.

Recruitment Methods

To reach the subjects, the following strategies were used: the participants were recruited from online communities such as LinkedIn freelance groups, Reddit forums (e.g., r/digitalnomad), Facebook groups for remote workers, and co-working space newsletters. Additionally, snowball sampling was used whereby initial participants were asked to refer their contacts.

Instruments

For the gathering of the data, some specific and the rest standardized devices are used in the process. It was made sure that the data is collected through different ways and is of high quality at the same time.

Interview Guide

The semi-structured interview guide consisted of open-ended questions regarding daily routines, workstation configurations, physical and psychological challenges, and desired improvements. Besides, it was also aimed to find out from the participants how meaningful and fluent the guide was. The guide was tested with three participants in a pilot study and then some of the questions were rephrased for better understanding.

Survey Questionnaire

The online survey was made up of five sections, namely: Demographics (age, profession, travel frequency). Work habits (average working hours, types of work environments). Discomfort Index (based on the Cornell Musculoskeletal Discomfort Questionnaire). Ergonomic Practices (knowledge and use of ergonomic tools). Satisfaction and Preferences (with current workstation) Ergonomic Assessment Tools: The RULA tool was chosen since it is suitable for the assessment of sedentary and upper limb postures. RULA scores were derived from the video shots of the participants and their photos during their work and the video processing of the photos for not all participants were done in the same way.

Procedure and Timeline

The study was carried out in six months, with planned stages to guarantee the methodical gathering, examination, and interpretation of data:

Month 1 – Planning and Instrument Development:

Literature review to inform methodology.

Development and piloting of research instruments.

Ethics approval obtained from the institutional review board.

Months 2–3 – Data Collection:

Semi-structured interviews conducted via Zoom and recorded with consent.

Surveys distributed through online channels.

Field observations conducted in 10 locations across 3 cities.

Ergonomic data collected from participants' submissions.

Month 4: Analysis of Data

NVivo is used for thematic categorization of observational and interview data.

SPSS is used to apply descriptive and inferential statistics to survey data.

Analysis and tabulation of ergonomic scores.

Month 5: Integration of Synthesis and Design:

combining data from both quantitative and qualitative sources.

creation of ergonomic requirement requirements and user personas.

preliminary concept generation for design solutions for portable workstations.

Reporting and Distribution in Month Six:

Drafted and peer-reviewed final report. Participants and pertinent online communities were informed of the main findings. Scholarly article preparation for possible publication.

Analysis

Complete data analysis is done with the help of questionnaires and surveys.

Questionnaires

Quantitative data has been gathered from the questionnaire which has been designed to get experiences by:

- Current workplace accommodations and adversities.
- Features they crave in the mobile workstation.
- Use scenarios and mobility requirements

The purpose of the research was targeted at studying the ergonomic challenges and spatial requirements of freelancers and influencers. The aim was to develop a small, modular workstation that would cater to their needs. The data analysis was carried out

using SPSS version 27.0. Reliability analysis verified the internal consistency of the scales used.

The key user preferences were found through descriptive statistics. The Independent Sample T-test was applied to detect the differences in ergonomic needs among diverse demographics. The results were communicated through tables, allowing the participants to gain a clear understanding of the serviceability of a multifunctional workstation to freelancers and influencers.

Table 1
Survey data, Descriptive of demographics

Descriptive Statistics of Demographic Variables		Count	Column N %
Age Group	18-24	31	72.1%
	25-34	9	20.9%
	35-44	3	7.0%
Gender	Male	30	69.8%
	Female	13	30.2%
Profession	Graphic designer	10	23.3%
	Freelancer	5	11.6%
	Content Creation	6	14.0%
	Software Engineer	6	14.0%
	Influencer	6	14.0%
	Student	9	20.9%
	Travel	1	2.3%
Purpose of Travel	Business/Work	25	58.1%
	Leisure/Personal Work	7	16.3%
	Others	11	25.6%

The survey's findings indicate a distinct pattern among participants. A noteworthy 72.1% of people are between the ages of 18 and 24. With 69.8% of the population, men make up a significant portion. Graphic designers are the most common profession, accounting for 23.3%. At 20.9%, students are in close pursuit. Business travel is the main justification for travel,with 58.1% said this is their primary goal. These observations point to a youthful, largely male demographic that is heavily represented in the professional and creative industries and predominantly travels for business.

Table 2
Traveling trend

	Frequency	Percent	Valid Percent	Cumulative Percent
Designing (e.g., graphic design, UX/UI)	16	37.2	37.2	7.2
Writing/Editing (e.g., content writing, copywriting)	8	18.6	18.6	55.8
Social Media Management	11	25.6	25.6	81.4
Others	8	18.6	18.6	100.0
Total	43	100.0	100.0	

Travelers Perception

Travel trend among Freelancer influencer has notably increased as it was clearly shown by the bar chart. At least 80% of the people working take travel at least twice or three times a month. Only a tiny portion of the population never travels. Whilst regarding the work hours, mostly people four to six hours (45%) or two to four hours (50%). The rest of the respondents put into less than two hours a day at work. These findings make it clear that whether one is working with a laptop in bed or standing at a tall desk, the comfort of the workstation is still paramount to his/her productivity.

Table 3
Tools and activities

Valid TOOLS	Camera & equipment	6	14.0	14.0	14.0
	Laptop/Smartphone	33	76.7	76.7	90.7
	Others	4	9.3	9.3	100.0
	Total	43	100.0	100.0	

The results show that the higher the percentage of the respondents are doing a particular task, the more common the activity would be among them. In this regard, the most common activities among respondents were Designing at 37.2% and Social Media management at 25.6%. Writing/Editing and other tasks each represent the same percentage, 18.6%. When it comes to tools, it is not surprising at all that 76.7% of the respondents mentioned that their laptops or smartphones are the most used devices, which are indicating certain factors. By charging some of the percentage, 14%, are using cameras and equipment. Then, 9.3% of the respondents mentioned that they are utilizing other tools. These findings serve notice of the demand for workstations.

Qualitative research

The data collection methods applied in this research consisted in interviews and observation of travel influencers and freelancers. By gathering these facts, the researcher has been able to further qualify and quantify the information collected and thus, concrete the effectiveness of the problem undertaken. There were no provisions for the public display of the user journey maps and personas coming from these data as both were left out. On the other hand, the user journey maps and personas might have been particularly helpful as they address the key aspects of user travel influencers and freelancers.

Survey 1

Daftarkhwan being a premium space in Pakistan offers a platform that could be used by startups, freelancers, and businesses as they can use the infrastructure and spaces as per their convenience. The founders were so thoughtful that they wanted to create a platform where people could learn new ideas and use them for the betterment of society through their businesses. Daftarkhwan offers various services which are covered in the list.

Event spaces

This setup encourages collaboration and growth among its members.

User Insight

In particular, this study looks at how to design a mobile workstation that meets the needs of remote workers and travel freelancers. Interviews were conducted in the main Daftarkhwan office at Gulberg 3, Lahore, to gather information. Three independent contractors—two web designers and one interior designer—participated. When traveling for work, these professionals have challenges in maintaining comfort and efficiency.

Demographics

Name: Hamza Ali

Age: 29 years

Profession: Interior Designer (Freelancer)

Location: Pakistan (travels nationwide for work)

Experience: 4 years of freelancing

Work Style: Remote, frequently works in public spaces like coffee shops, coworking spaces, and client sites.

Travel Frequency: Regularly travels from city to city for the past 3 years

Table 4
INTERVIEW 1 (interior designer)

Question	Answer Based on Interview with Interior Designer
1. What type of work do you primarily do on the go?	He is a interior design primarily works on sketches, concept development, 3d modeling while traveling.
2. How often do you work while traveling?	He often works outside a fixed location 2-3 times a month
3. What are the essential tools or equipment you always carry for work?	Essential tools, laptop, smartphone, sketching tablet, measuring tools, laptop mouse, and stylus for on-the-go tasks like drafting ideas or sketches.
4. How much desk space do you typically require to work comfortably?	A medium to large desk space is essential for effective work. This is particularly true when you are creating design sketches or referencing materials and tools.
5. Have you experienced any physical discomfort?	Adjustability plays a crucial role in comfort. An interior designer has faced neck pain and wrist strain due to uncomfortable seating and positioning while traveling or working at client sites.
6. How important is adjustability in your workstation?	Adjustability plays a crucial role in interior design. Designers frequently operate in diverse settings. The ability to modify height or angle significantly improves comfort and productivity.
7. Would you use a built-in ergonomic chair or support if provided?	A built-in ergonomic chair or support plays a vital role in ensuring comfort during long work hours, whether you are traveling or working remotely.
8. Do you need compartments for organizing gadgets, cables, and personal items?	Organizing gadgets, cables, design tools, and personal items is essential for efficiency and accessibility. Consider these compartment options Individual sections for chargers, Dedicated spaces for sketching materials, Separate areas for digital tools.
9. Do you face challenges with weight or size when carrying your workstation?	Carrying multiple tools, especially heavy measuring devices and sketching materials, can be cumbersome. A compact workstation offers a more efficient solution.
10. What is the ideal weight and size for a portable workstation for you?	A portable workstation should weigh between 10 and 15 kg. It needs to be compact yet spacious enough to accommodate essential tools such as a tablet, laptop, and sketchpad.
11. Would you prefer a workstation that can double as a bag or have detachable components for easier carrying?	The interior designer prefers a workstation that can also function as a bag. Detachable components would help keep items organized during travel and minimize bulk.

- User Persona

Hamza Ali, a traveling freelancer, exemplifies a user group that needs a portable and ergonomic workstation. By focusing on his unique challenges, we can create features that boost his productivity. This approach allows him to maintain professionalism and work comfortably, no matter where he is.

Fig 1 user persona

Design Implications

The findings support developing a modular, ergonomic workstation that addresses the physical comfort and mobility needs of traveling professionals. Key design features should include adjustable desk components, lightweight structures for portability, and customizable configurations to support tasks like content creation, design, and social media management.

This research indicates a strong demand for workstations that balance portability, functionality, and ergonomic optimization, providing a flexible, user-centric solution to the unique challenges faced by traveling freelancers and influencers.

Concept development

A thorough study of the difficulties faced by independent contractors and remote workers—particularly those operating in non-ergonomic or informal settings including coffee shops, co-working spaces, beds, and temporary setups—guided the design of the portable ergonomic workstation. Delivering a small, easy-to-use, and health-conscious solution was the goal. Important factors are explained in depth below:

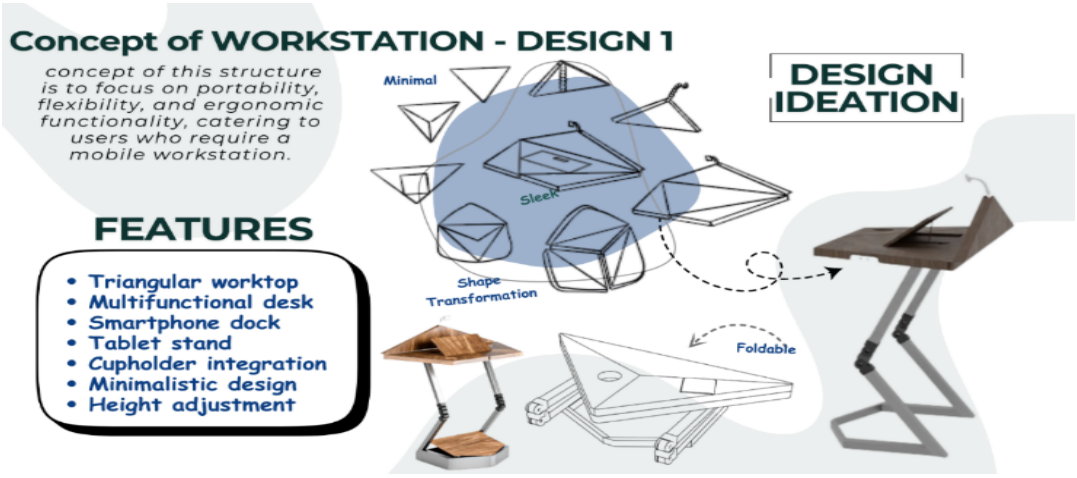

Fig 2 Ideation Ergonomics

To make holding and carrying the workstation easier. A proper packaging is designed and a proper spacing is provided to hold workstation and chair inside it.

Physical pain brought on by bad posture and extended work hours was one of the main issues shown by both local and international case studies. To deal with this:

- There were movable parts, like a laptop base that could be raised or lowered to guarantee eye-level screen alignment and lessen shoulder and neck strain.
- Correct lower back alignment is ensured via lumbar support integration, which is especially crucial for users who do not have ergonomic seats.

Angle and wrist support -adjusted typing surfaces assist avoid repetitive strain injuries (RSI) and reduce tiredness.

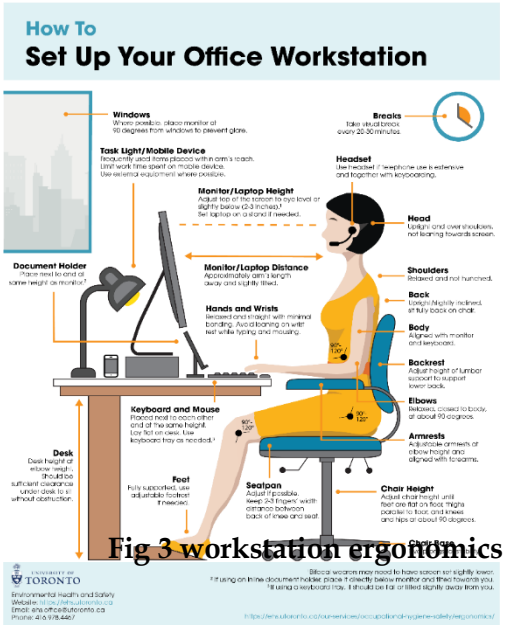

Fig 3 workstation ergonomics

Production Process

To guarantee performance, portability, user comfort, and structural integrity, the portable ergonomic workstation was produced in several planned stages. Including component manufacture, assembly, and stability testing, the total process took about two months.

Fig 4 Production process

Initial Research and Market Survey

In order to identify the present shortcomings in portable workstation designs and to learn more about user pain points, particularly those of remote workers and freelancers, market surveys were first conducted. At this point, appropriate materials, portability requirements, and ergonomic criteria were determined.

Material Selection

The following materials were chosen in accordance with functional requirements and market feedback: Because aluminum composite sheet is lightweight, strong, and resistant to corrosion, it is utilized for both the top and bottom surfaces. The legs are made of stainless steel tubes, which offer robust support and long-term durability without sacrificing portability. These materials guaranteed strength-to-weight balance, a sleek appearance, and ease of manufacture.

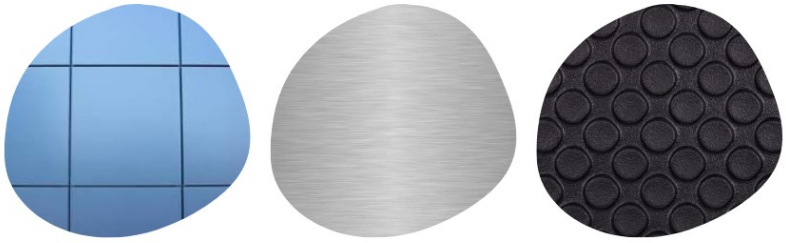

Fig 5 aluminium composite, aluminium, and rubber

Joint Mechanism Development

Two types of joints were developed for modularity and folding mechanisms:

- Ratchet Joints – custom-manufactured over the span of 1 month for the adjustable leg mechanism, allowing controlled angular movement and secure locking.
- Concealed Hinges – used for the foldable tabletop, providing seamless folding without external hardware exposure.

Fig 6 joint mechanism

User Interface and Usability

The user interface was maintained simple from the perspective of product interaction. Among the crucial factors were:

- Simple folding and unfolding processes that need few steps.
- The user can be guided on how to lock or change components by visual cues or engraved indicators.

A design that prioritizes easy, useful changes above offering the user too many options
The objective was to develop a product that gives considerably better ergonomic advantages while feeling as natural to use as a laptop.

Fig 7 final product

Survey and Interview Results Quantitative results confirmed a youthful, creative demographic with high travel frequency and dependence on digital tools. Most participants worked 2–6 hours daily while traveling. Ergonomic discomfort (back, neck, wrist pain) was common.

Qualitative data highlighted the demand for:

- Adjustable surfaces
- Modular components
- Dedicated compartments for tools and cables
- Lightweight but spacious setups

User Persona: Hamza Ali Hamza Ali represents typical needs of a traveling freelancer: comfort, space, tool storage, ergonomic support, and portability. His insights directly influenced workstation features.

Design Implications

- Adjustable desk and wrist angles
- Lumbar support and ergonomic height
- Foldable, lightweight design
- Modular compartments and bag-transforming options

Product Development and Concept Design Ergonomics

- Adjustable laptop base for screen alignment
- Lumbar support for back health
- Wrist angle adjustments for typing comfort

Production Process

- Two-month development timeline
- Ratchet joints for flexible leg adjustment
- Concealed hinges for clean folding

Material Selection

- Aluminum composite for surfaces
- Stainless steel tubes for legs

User Interface and Usability

- Simple, guided folding mechanisms
- Visual cues for interaction

Conclusion

The development of a portable ergonomic workstation prioritized mobility, usability, and ergonomic support. Through a combination of surveys, interviews, and ergonomic assessments, the study identified key pain points and translated them into actionable design features. The resulting product offers posture correction, modularity, and travel-friendliness, addressing the needs of digital nomads and remote freelancers**.**

Recommendations

- Future designs should include customizable modules based on profession (e.g., designers vs. writers).
- Incorporate sustainable materials and user-friendly instructions.
- Add power integration (solar, USB-C hubs) for long travel hours.
- Provide ergonomic awareness training with each unit sold.
- Expand study to include participants from other countries for global insights.

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