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Developing a sustainable career for designers by using the salary-skills relationship for Chinese designers

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Abstract

The value of designers is determined by market-based compensation which reflects the status of the design industry, the career paths of designers, reform directions in design education and the deconstruction of design skills. This article aims to elucidate designers' requirements, responsibilities and compensation by scrutinizing online job advertisements. Previous studies have focused on macro design aspects such as propaganda and procedural methods, neglecting individual designers' compensation and treatment. This study used Python technology to search for online job and analyzed 1,108 good job postings using content analysis and descriptive statistics. Additionally, interviews were conducted to investigate the skill requirements of company designers. The findings revealed vital skill points that contribute to increased salaries for designers. High-paid designers possess core skills in managing design strategies and business processes. Middle-paid designers demonstrate abilities in executing design projects and working in teams. Low-paid designers perform better and have better software capabilities. The research's findings guide students in choosing their majors and research options and identify core skills for designers already in the workforce. Furthermore, this study offers objective data for enterprise talent acquisition and development strategies.

Keywords: Career planning, Content analysis method, Design education, Design skills, Designer, Python, Salary, Word frequency statistics.

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1. Introduction

The art of commercialization appears in design while designers' remuneration reflects the industry's development status. Investigating designers' earnings may help them plan their careers, boost business profitability, promote industry growth and ensure long-term education and training. This article aims to elucidate designers' requirements, responsibilities and compensation by scrutinizing online job advertisements. We developed the following study questions by carefully classifying and summarizing the recruiting data: (1) "What variations exist in compensation offered to designers by different companies?" (2) "Which key skills exert a significant impact on compensation differentials?" (3) "How can training programs enhance these pivotal skill areas?" Extensive literature exists on various job classifications and career opportunities for designers but further study is still needed to understand the complex relationship between salaries and required abilities. The following objectives and achievements have been the main focus of previous studies: (1) Yang Minying looked at the job context for industrial designers within the field of professional expertise [1]. Paulo delved into the employment dynamics of graphic designers [2]. Kunrat explored the overall employment panorama of design educators [3]. (2) Backhaus analyzed recruitment prerequisites from an enterprise-centric perspective regarding the research [4]. Hatch examined the skill of designers in high-paying industries [5]. Mara examined the best ways for students to develop their portfolios and advance their abilities [6]. (3)Ramirez investigated the work market from the perspective of designer skill development [7]. At the same time, Roytek synthesized the direction of educational cultivation in design disciplines within the context of higher education [8]. Finally, Kamp argues that the challenge facing design education lies in foreseeing the skills graduates will require for future employment [9]. Consequently, delving into the correlation between salaries.

After analyzing 1018 online job advertisements, we obtained valuable insights into the salary range and core skills required for the designer position. Drawing from the "ability learning model" [10], we formulated the job requirements based on the following dimensions:(1) Designer salary distribution, educational background, geographic disparities, industry attributes and major categories as depicted through descriptive statistics. (2) Construction of a comprehensive skill system essential for designers' job applications. (3) Comparative analysis of design skills across different salary ranges. (4) We are conducting in-depth interviews with three representative companies to gather career planning recommendations for designers. The specific research procedures and methods are illustrated in Figure 1.

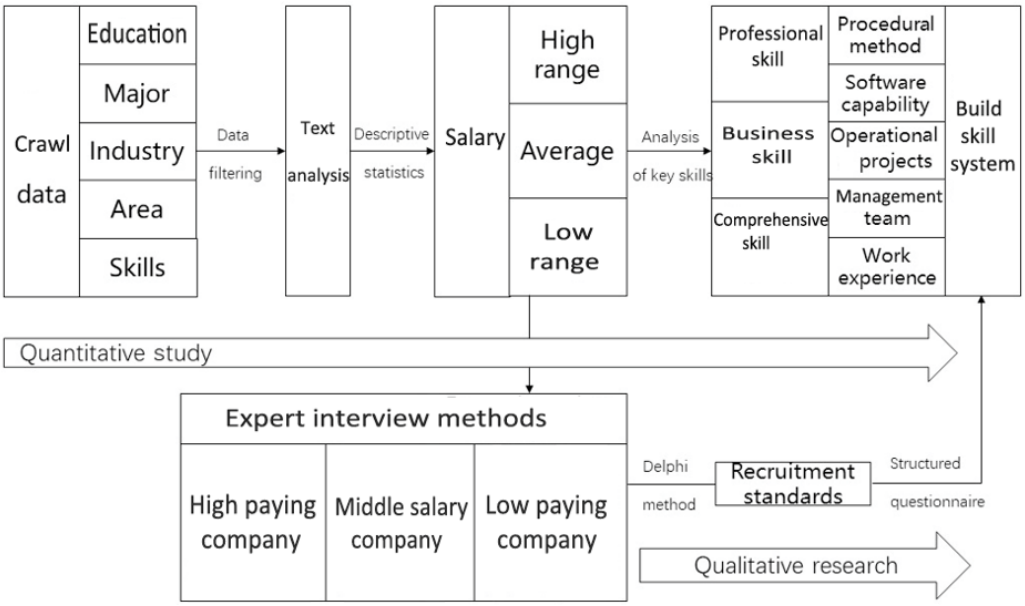

Figure 1.
Research process and method.

The study's findings showed that highly compensated designers are good at managing business processes and strategically planning design efforts. Median-paid designers exhibit proficiency in executing design processes, coordinating team members and comprehensively understanding production procedures. On the other hand, low-paid designers specialize in software skills and demonstrate a positive work attitude. These research findings offer valuable insights for enhancing designers' skills and career planning. Furthermore, they inform the reform priorities in design education and serve as a reference for talent acquisition in enterprises. Therefore, we provide significant assistance for stakeholders' long-term planning and gain insights into the viability of the design sector through a generally neutral remuneration system.

2. Literature Review

2.1. Research Background

There has been limited research done on designer salaries globally despite the commercial importance of designers. For instance, research has looked at the earnings of British graphic designers [2], wages and skill levels of Brazilian designers [11], job-seeking abilities of Turkish designers [12], talent requirements for Asian designers in the user

experience industry [13] and the living conditions of Chinese designers [14]. These examples illustrate the global scholarly interest in discussing designers' living conditions.

The value of design lies in its ability to generate commercial benefits while the remuneration of designers reflects their influence and importance [15]. Organizations can improve their competitiveness by connecting the recruitment demands of businesses with the skill requirements of designers. [16]. Therefore, research that explores the relationship between enterprise demands and design skills contributes to the development of the design industry and aids designers in making informed career decisions.

We intend to investigate the relationship between designer salaries and skills by using Python technology to collect and analyse recruiting data. Specifically, we seek to explore the following aspects :(1) The essential employment skills that designers should possess. (2)The salary that companies can offer. (3)The specific occupational skills are associated with different salary ranges. We examine how different skill types align with varying pay grades through a comparative analysis of various job advertisements.

2.2. Research Status

According to the Ministry of Education of the People's Republic of China [17], design has attained the status of a first-level discipline following the official elevation of art to the thirteenth discipline category. This signifies the increasing recognition of design's academic standing and its growing market value. It is crucial to explore the skills designers need to possess to be sought after by the market. Additionally, we can investigate the relationship between the salaries companies offer and the requisite capabilities.

In our research, we used the keyword "design salary" and conducted a web of science search, retrieving only 28 papers. We analyzed the co-occurrence of domestic and international literature using VOSviewer to gain further insight (see Figure 2).

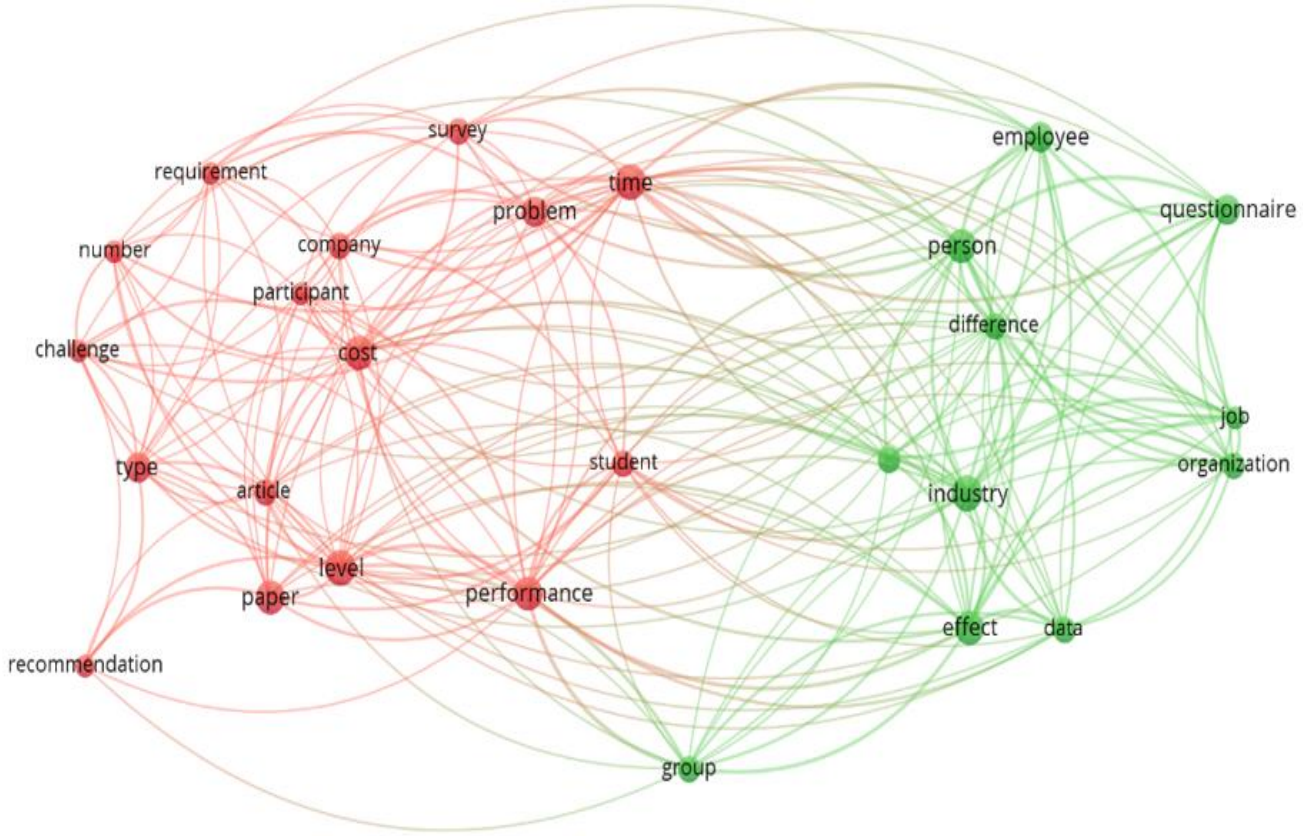

Figure 2.
The co-occurrence network of domestic “designer salary” research keywords.

Simultaneously, we searched the web of science through the VOS viewer by employing the keywords "designer skills" and "designer capabilities. This search yielded a total of 168 literature sources. The co-occurrence analysis of domestic and international literature is presented in Figure 3 providing valuable insights into the topic.

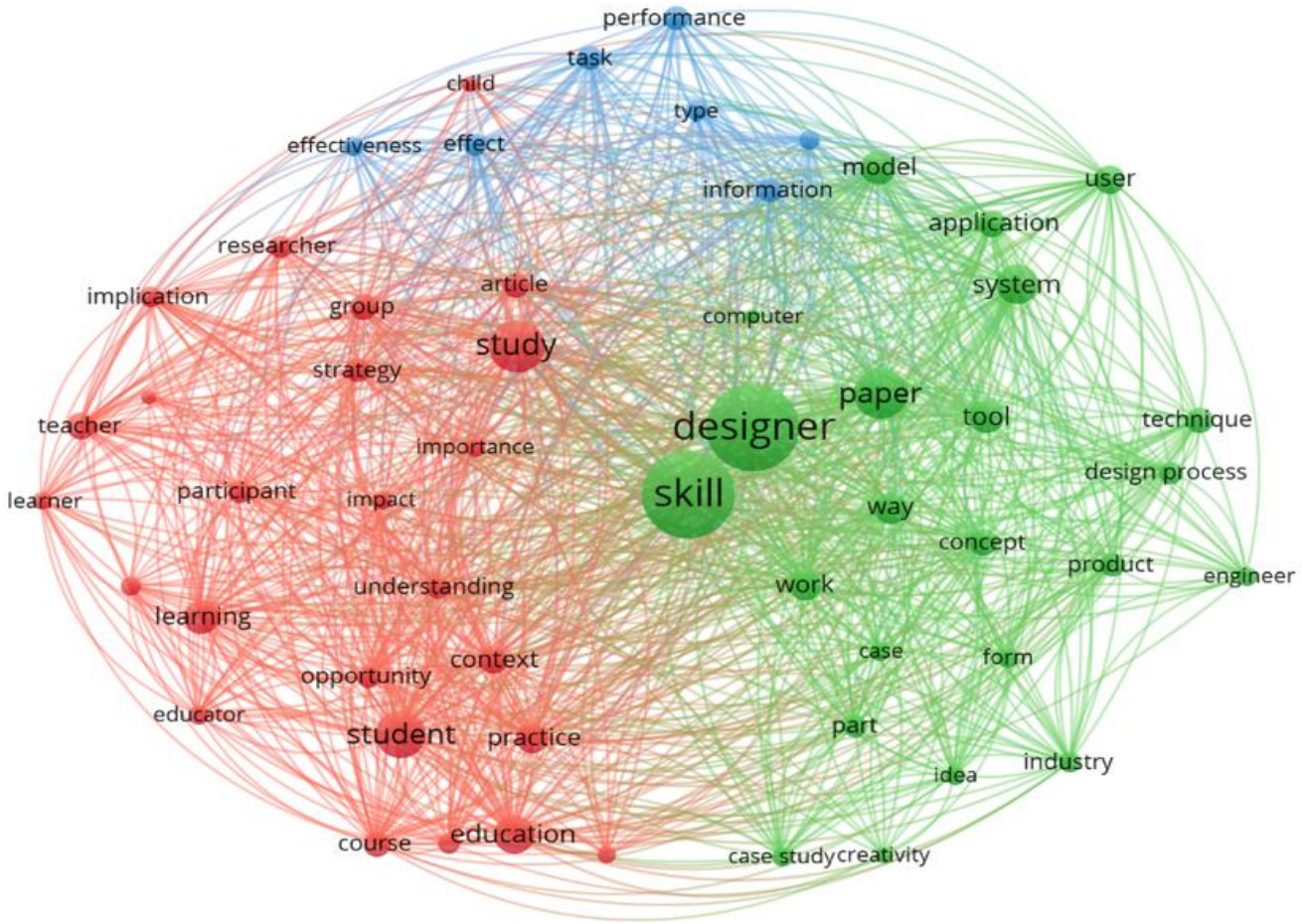

Figure 3.
The co-occurrence network of domestic "designer skills" research keywords.

A comprehensive review of domestic and international research literature reveals the following trends:

In domestic research, designer compensation focuses on corporate culture, performance management and industry analysis. On the other hand, the foreign study primarily emphasizes design education, enterprise costs and design methodologies.

Regarding designer skills, domestic research concentrates on professional competence, design management and industry segmentation. Conversely, foreign research explores innovation, strategy, principles, education, engineering and case studies.

In general, there are few studies that specifically examine the income of designers, both domestically and globally. When it comes to research on design skills, there is a greater emphasis on investigating micro-level skill points (such as innovation ability, expressive capability and design methods) in China. However, a lack of comprehensive research synthesizes designer skills from a macro perspective. Research on skills tends to be more systematic.

2.3. Research Purpose

This research proposes a salary analysis of regional design demands considering the current national context. This analysis aims to gain insights into macro-level industry dynamics and micro-level individual growth patterns. Previous studies have discussed the value of design, designer competency management, design education approaches and corporate design innovation strategies from a macro perspective. However, there needs to be more exploration of the relationship between two crucial aspects: the market value of designers and the talent costs enterprises bear.

The market orientation of the design industry determines whether designers focus on acquiring skills that yield higher salary returns. Therefore, this study examined the micro-level factors that influence designer salaries. Designers can understand their salary range and skill characteristics comprehensively, facilitating the development of objective career plans and targeted learning paths by collecting market data. Simultaneously, enterprises can refer to the research findings to inform talent acquisition strategies and ensure salary rationality.

2.4. Research Contribution

The study's findings have two advantages: first, they help designers understand their positions and pursue specific self-improvement; second, businesses may use the information to establish appropriate remuneration for designers with complimentary talents which leads to efficient talent-market matching, reduced trial-and-error costs and improved market operation efficiency.

Moreover, the research findings serve as a valuable reference for design education reform. Colleges and universities can leverage their geographical advantages to provide targeted professional guidance and practical talent development opportunities that align with local economic development. Furthermore, the differentiated salary ranges highlight the importance of tailored design education and training. The development of talents at all levels of market activities should be prioritized rather than only concentrating on the development of comprehensive high-end design management, design strategy and service design abilities.

A one-size-fits-all approach may be avoided by tailoring design education to the various market demands and fostering individuals who have the necessary knowledge and experience for certain market segments.

3. Materials and Methods

3.1. Research Objects

Prior research has focused on the sample size, macroscopically gathering and combining data from several recruiting websites. However, they had to manage the recurrent data statistics, variable release schedules and requirements of various websites. Therefore, this time we focus on the quality and depth of the samples. The specific research preparations are as follows:

Objective comparison of recruitment data sources: We conducted searches using the keyword "designer" on four mainstream recruitment websites. The following observations were made after comparing different job sites and channels:

Zhilian.com retrieved 752 recruitment details but over half of the remuneration packages were listed as “interview-based” making in-depth analysis impossible.

Worry-Free collected 50 data points but the web page's built-in anti-crawler technology hindered data collection.

Lagou.com retrieved 301 recruitment information considered a small sample size.

Finally, Zhaopin with 1018 job postings was chosen to ensure the quality of statistical data and conduct in-depth data mining.

Limitation of data collection time: We conducted web crawling on the same website for three consecutive days in early April 2022 to ensure the objectivity of the recruitment data. The number of job changes during this period was at most 1%. The finalized data collection date was set as April 6, 2022 and the job posting period covered the timeframe from October 1, 2021 to April 6, 2022.

Data sorting and classification: We grouped the online employment related to User interface (UI) design and interaction design into the category of information art design to facilitate data classification. Cultural and creative design, shoe design, display design, product design and process design were classified as industrial product design. Illustration, advertising and graphic design were categorized as visual communication design. 3D prototype design and animation design were classified as digital media art design. Interior design and rendering design were grouped under environmental art design.

We aim to enhance the quality and reliability of the statistical data and provide a more comprehensive understanding of the recruitment landscape for designers by implementing these research preparations.

3.2. Research Methods

The research process involves three main steps:

Classification and Analysis of Recruitment Data: The initial step is to classify the 1018 recruitment data based on keywords and conduct content analysis. The independent variables are education, primary, industry and skills while the dependent variable is salary. This analysis helps identify the skill factors that influence designer salaries considering the salary range offered by companies and the skills designers need to possess to secure high-paying positions. It also explores how designers can self-learn to acquire crucial skills.

Quantitative Descriptive Statistics Analysis: The collected data is then subjected to quantitative descriptive statistics analysis using SPSS software. A correlation analysis is performed between salary and recruitment requirements. Additionally, dimension construction and word frequency statistics are employed to extract the skill composition of recruitment requirements. This analysis provides data support for investigating the salary offered by enterprises and the skill requirements for designers.

Case Study and In-Depth Interviews: The research includes interviews with corporate design executives offering different salary ranges. The results of these interviews are coded and analyzed. This qualitative approach allows a deeper understanding of salary factors and provides valuable reference suggestions for designers' growth paths and career planning.

This research methodology aims to provide comprehensive and meaningful insights into the relationship between designer salaries and required skills and practical guidance for designers and enterprises.

3.3. Research Process

The research process described follows a systematic approach to understand the market dynamics and survival of designers. Here is a summary of the steps involved:

Quantitative Statistics: The research begins with quantitative statistics to analyze the essential characteristics of the designer population such as education distribution, occupational differences and professional composition. This step provides an overview of the independent variables.

Correlation Research: Correlation research is conducted to establish the relationship between salary and skills using the identified keywords as independent variables and the salary range as the dependent variable. This analysis helps reveal the factors that influence salary composition.

Skill Composition Analysis: Job requirements from the recruiting data are divided into skill sub-dimensions and skills are separated into professional, business and personal abilities. The top design talents are identified by word frequency software.

Correlation Analysis: A correlation analysis is performed between the salary range and the core sub-skills that companies emphasize that provides insights into the alignment between salary and the skills companies value across high, middle and low salary ranges.

In-depth Interviews: Representatives from companies offering different salary ranges are selected for in-depth interviews. These interviews aim to understand the rationale behind recruitment standards and the training of critical skills. Valuable advice on career planning for designers can be obtained through these interviews.

This research methodology enables a comprehensive understanding of the factors influencing designer salaries and the skills that employers value by combining quantitative analysis with qualitative insights. The research outcomes can guide career planning and inform recruitment standards in the design industry.

4. Results

4.1. Educational Distribution

A list of the academic requirements based on information gathered from the 1018 recruitment posts is given below: Campus Recruitment for Fresh Students: Out of the 1018 positions, 166 are targeted explicitly at fresh students from campuses accounting for 16.3% of the total.

Social Recruitment: The remaining positions are categorized as social recruitment indicating they are open to candidates with varying levels of work experience.

Academic Qualifications: After removing 26 data points, there were 992 valid data points.

Technical Secondary School Degree: Only two positions (0.2%) require a technical secondary school degree.

College degree or above: 167 positions (16.8%) require at least a college degree.

Bachelor's degree or above: Out of the positions requiring a college degree or above, 587 (59.2%) specify a bachelor's degree or above requirement.

Master's degree or above: Among the positions that require a college degree or above, 93 (9.3%) require a master's degree or above.

Doctoral Degree: Only six positions (0.6%) require a doctoral degree.

Unlimited Degree: 136 positions (13.7%) do not specify any limitations on the degree required.

These statistics are visualized in Figure 4 which providing an overview of the distribution of academic qualifications among the recruitment positions.

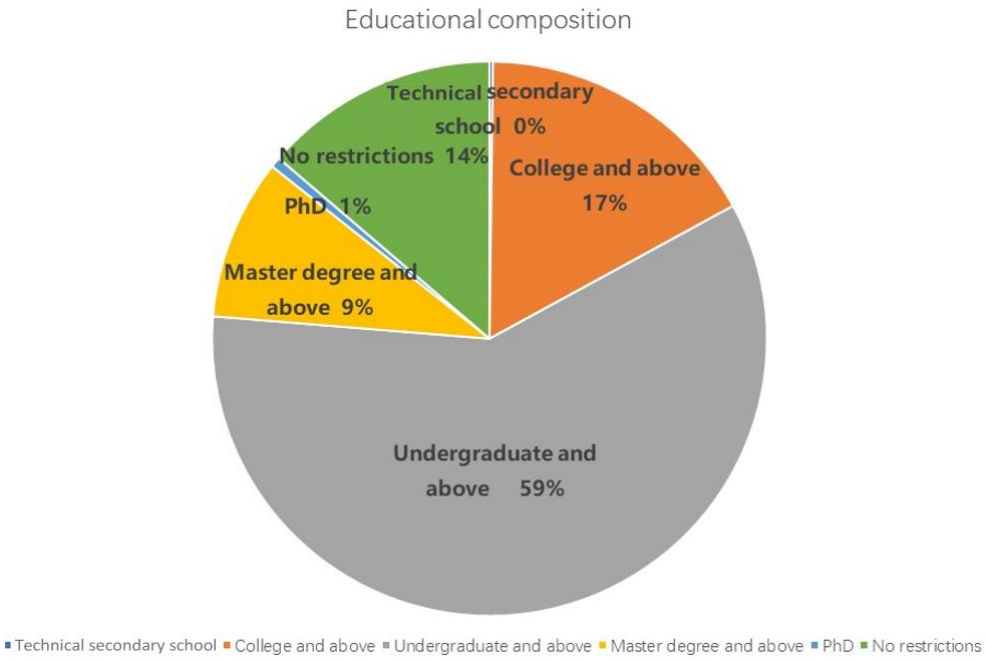

Figure 4.
Educational composition of the recruitment market.

It can be challenging and influenced by numerous factors to compare the salaries of graduate students versus undergraduates. Graduate students frequently devote more time and money to their studies which may increase their earning potential. However, it is crucial to consider that this comparison does not consider the work experience and skills gained by undergraduates during the same period.

The relationship between academic qualifications and salary primarily reflects the market's recognition and demand for certain levels of education. Higher educational qualifications such as a master's or doctoral degree may be valued by employers in specific fields and industries. These degrees often signify advanced knowledge, specialized skills and the ability to engage in complex work tasks.

It is worth noting that academic qualifications play a role in salary determination. Other factors such as work experience, job performance, specific skills, industry demand and negotiation skills also contribute to salary differentials. Therefore, it is essential to consider a comprehensive range of factors when analyzing salary levels and career prospects for different academic qualifications.

4.2. Salary Range

Technical secondary school education: Two people were recruited with an average salary of 6,500Yuan.

College degree or above, 62 people were recruited with an average salary of 7,600 Yuan.

Bachelor's degree or above, 62 people were recruited with an average salary of 8,600 Yuan.

Master's degree or above, 66 people were recruited with an average salary of 11,000 Yuan.

These figures indicate a general trend of increasing average salaries as the level of education rises.

However, it is essential to note that various factors such as industry, job role, location, work experience and individual negotiation skills influence average salaries. These figures give an overview of the association between pay and education level in the dataset. However, they could not fully reflect the job market or the variables influencing pay disparities.

Table 1.
Relationship between salary and educational background.

Salary Educational background	Sample size	Proportion	Minimum value	Maximum value	Mean value	Standard deviation
Technical secondary school	2	0.5%	0.65	0.65	0.65	0
College and above	62	14.6%	0.35	2.5	0.76	0.35
Undergraduate and above	266	62.9%	0.4	2.33	0.86	0.35
Master’s degree and above	66	15.6%	0.6	2.25	1.1	0.32
PhD	1	6.1%	2.6	2.6	2.6	
No restrictions	26	0.25%	0.35	8	1.8	2.4

It is important to note that six people in the sample have PhD degrees. Only one of them has a recognised position and receives 26,000 Yuan monthly salary. On the other hand, 26 individuals were recruited without the prerequisite qualifications and their average salary was 18,000 Yuan. These figures are depicted in Table 1.

The table reveals that after removing the factors of time input cost and work experience, the minimum and average salaries gradually increase with the enhancement of academic qualifications.

The data on PhD degrees and technical secondary schools is not sufficiently representative due to the rising trajectory. Doctorate holders typically pursue careers in academic and research settings which explains why their recruiting information is missing from traditional company websites.

Furthermore, our analysis combined employment figures across various cities revealing a noticeable rise within the design industry.

Presently, the geographical focal points for design professionals' employment predominantly encompass South China and well-known metropolises such as Beijing and Shanghai. This information is elucidated in Figure 5.

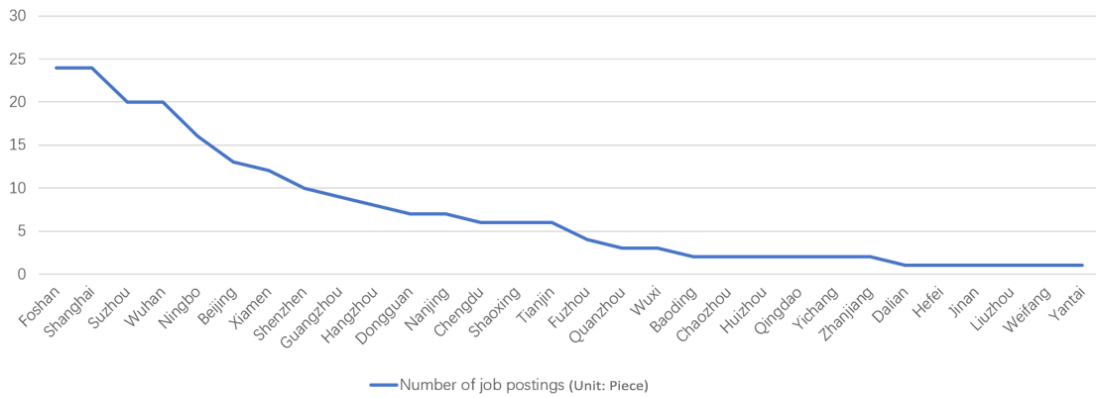

Figure 5.
Analysis of regional differences in the recruitment market.

4.3. Industry Differences

The industry's development potential presents greater prospects for advancement than an individual's solitary efforts. The significant growth seen in businesses such as the internet, real estate, education and training and financial industries is one of the most instructive examples. These areas show a dynamic landscape of development and prosperity. On the other hand, traditional heavy industry manufacturing, warehousing and logistics have experienced comparatively sluggish

development. As a result, designers should adopt a macro-level strategy when selecting their career path, closely tracking national policy trends, prioritizing societal welfare and delivering specific services tailored to particular needs. This information is visualized in Figure 6.

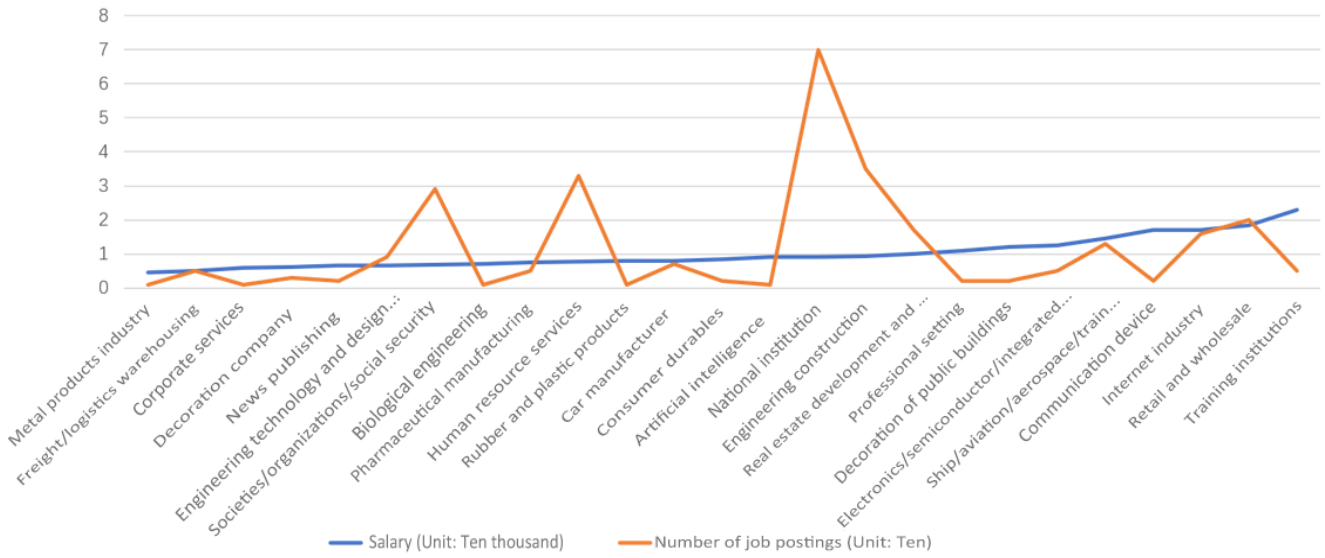

Figure 6.
Composition of industry differences in the recruitment market.

According to the figure given, there is a noticeable sturdy spindle-shaped structure among the 25 industries. Generally, the proportion of high- and low-income groups is relatively small, with the majority falling within the middle-income bracket. This distribution of segmental income is beneficial for fostering sustainable societal development. A detailed analysis is provided as follows:

National institutions, artificial intelligence, human resources, engineering technology and design service industries exhibit relatively high recruitment positions. It is worth noting that policy factors impact the real estate and training industries which are expected to experience a downward trend in the future.

Industries with an average salary exceeding 10,000 Yuan encompass the internet, ship, aviation, aerospace or train manufacturing, electronics, semiconductors, integrated circuits, real estate development and operation, public building decoration, retail/wholesale, communication equipment, special equipment and training.

The freight or logistics warehouse industry reflects an average salary of 5,000 Yuan. However, with the economy's ongoing transformation from tangible to intangible realms, salaries for blue-collar positions are anticipated to increase gradually.

4.4. Professional Composition

The designer's concepts mentioned above include various fields such as engineering, structure, manufacturing, art, modeling, craftsmanship, and related disciplines.

We have excluded majors in science, and engineering by conducting a professional screening process based on 595 simplified recruitment information. This refinement yields 224 valid messages for analysis. Information art design (which concentrates on the internet) has a higher salary despite substantial sector variances. Wages for other majors tend to be similar. Moreover, significant potential for wage increases is provided by the architectural design. These details are summarized in Table 2.

Table 2.
Relationship between salary and major.

Salary Major	Sample size	Proportion	Minimum value	Maximum value	Mean value	Standard deviation
Information art design	51	22.8%	0.35	2.33	1.07	0.55
Packaging design	3	1.3%	0.7	0.75	0.72	0.23
Fashion design	6	2.6%	0.7	0.95	0.88	0.93
Industrial design	54	24.1%	0.45	1.8	0.83	0.31
Environmental art design	44	19.6%	0.35	1.85	0.77	0.34
Architectural design	23	10.3%	0.5	2.25	0.88	0.42
Landscape architecture design	3	1.3%	0.9	1.05	0.95	0.87
Visual communication	40	17.9%	0.4	1.5	0.8	0.31
Digital media art design	18	8%	0.45	1.1	0.83	0.22

Aligning professional judgments with the broad trend of technological developments and national development strategy frequently yields superior returns. Recent years have witnessed significant growth dividends in the internet and real estate industries. Therefore, a higher sense of stability may be achieved by selecting career paths in visual communication, industrial product design and environmental art design.

4.5. Skill Composition

We can extract core skills as skill dimensions by integrating professional, business and comprehensive skills [13, 18]. These skill dimensions are derived from the job requirements mentioned in the recruitment text. The identified keywords are then categorized into sub-skills. In Table 3, a comprehensive overview of the specific skill dimensions and corresponding job descriptions is given.

Table 3.
List of skill categories of designers.

Elements of skill	Sub-skill element	Job requirements
Professional ability	A: Design procedures and methods	A1 Design process: responsible for creative project ideas, proposal reporting, process follow-up, etc.
		A2 Design method: improve work efficiency through professional design skills and methods.
	B: Software skills	Proficient in operating CorelDraw/Sketch/Photoshop/ Rhino and other design software.
	C: Aesthetic ability	C1 Have excellent taste, systematic aesthetic training, and an interest in luxury goods and fashion.
		C2 Superior aesthetic, strong passion for design
	D:Creativity	D1 Be able to capture market demand accurately and put forward differentiated selling points.
		D2 Creative thinking, learning positive, good communication skills.
	E:Manufacturing process	Understand the product manufacturing process of the design object and have color material finishing (CMF) design experience.
Business ability	F:Management ability	F1 Able to manage the company's projects and teams. Carry on the whole process of design management for the project.
		F2 Check and deal with problems such as selection, scheme review, drawing review, production follow-up, etc.
	J:Operation project	J1 Good presentation and communication skills.
		J2 Responsible for the unification of the style of each series of products and the formulation of design standards.
Comprehensive ability	H: Professional qualifications	H1 Professional counterpart.
		H2 Educational background restrictions.
	I:Working attitude	I1 Hardworking, studious, cheerful personality, ability and a strong sense of responsibility.
		I2 Have a good sense of teamwork, be good at communication and have a cooperative spirit.
	J:Work experience	Relevant project experience is preferred.
	K: Physical quality	Strong anti-pressure ability, able to withstand high-intensity working pressure.

Additionally, descriptive statistics have been compiled for the five core indicators with the highest frequency and are presented in Table 4.

Table 4.
Word frequency statistics of different skills in three salary ranges.

Sub-skill element	Core skills	Frequency / Times	Percentage /%
A: Design procedures and methods	A1 Design process	193	26.8%
H:Professional qualifications	H1 Professional qualifications	161	22.3%
B: The ability to operate software	B The ability to operate software	141	19.6%
I:Working attitude	I2 Team consciousness	114	15.8%
J:Work experience	J Work experience	30	4.2%

We divided the wage data into three groups based on tertiles to further enhance the statistics. The low-salary ranges between 0.15 and 0.6 million Yuan with an average salary of 5,400 Yuan representing 32.1% of the data. The median salary range is 0.61 to 0.75 million Yuan with an average salary of 0.724 million Yuan accounting for 21.6% of the data. Finally, the high-salary range encompasses salaries above 0.75 million Yuan with an average salary of 11,900 yuan, constituting 46.3% of the data. Table 5 shows a comprehensive overview of the core skills associated with different salary ranges.

Table 5.
The word frequency statistics of different skills in the three salary ranges.

Salary ranges **Design skills**	**1.5~6 / K RMB**	**6.1~7.5 / K RMB**	**7.6~40 / K RMB**
A: design procedures and methods	64	43	88
H:professional qualifications	62	37	63
B:The ability to operate software	54	35	52
I:working attitude	37	24	54
J:work experience	6	7	17
F: management ability	0	4	21
C: aesthetic ability	13	2	5
D:creativity	5	6	8
K:physical quality	6	3	1
E:manufacturing process	3	2	3

The sub-skills will serve as the horizontal axes for the data visualization. The three compensation ranges (low, medium and high) will be represented by blue, orange and grey columns on the Y axis. The differences between these ranges will be illustrated in Figure 7.

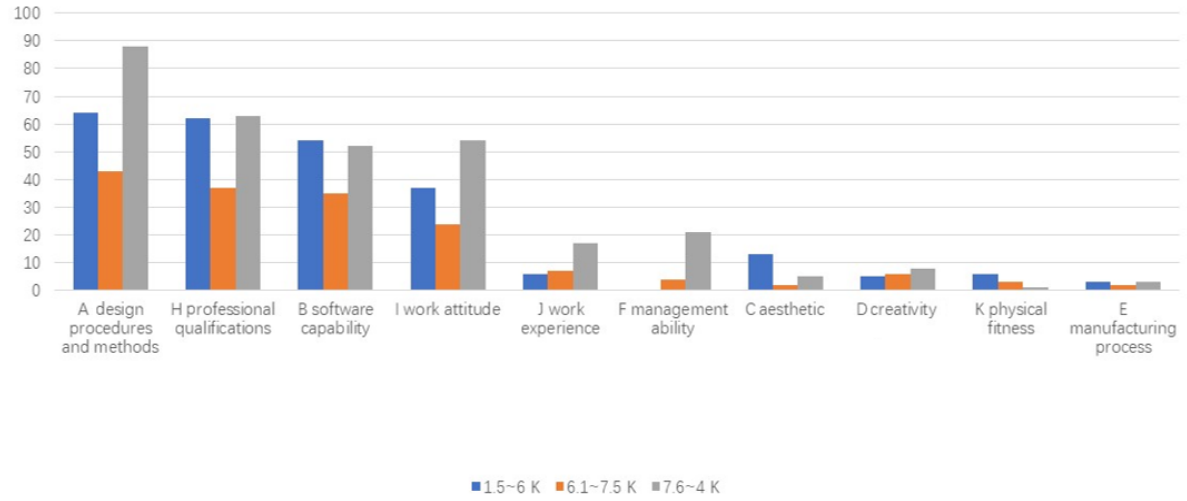

Figure 7.
Analysis of skill differences in three salary ranges.

In summary, high-paying design jobs in the job market are predominantly found within online companies and high-tech manufacturing industries. Architectural designers stand out among those with higher incomes because businesses place a high value on design talent, job experience, innovation potential and stability. Furthermore, subdivision reveals that high-paid designers prioritize managing the design process and personnel. In contrast, middle-paid designers focus on the implementation of design projects and the ability to collaborate effectively within teams. On the other hand, low-paid designers concentrate on proficiency in software skills and displaying a proper work attitude.

4.6. Expert Interview Method

This article employs a comprehensive approach using text analysis, descriptive statistics, case studies and expert interviews to assess the impact of skills on salaries. The author conducts in-depth interviews with representative employees from three salary ranges to gain deeper insights.

The high-salary company sample selected is Fujian Star Net Ruijie Communication Co., Ltd., the medium-salary company sample is Xiamen Jinlong United Automobile Industry Co., Ltd. and the low-salary company sample is Quanzhou Tiangao Stationery Co., Ltd.

The first step involves in-depth interviews with design directors representing each company using the Delphi method. These interviews aim to understand the company's recruitment logic and the formulation of its standards. Unstructured questionnaires are used and data is collected through text and mobile phone recordings.

Next, the materials from the focused interviews are organized. Keywords are extracted from the recruitment criteria, refined and combined with the initial skill dimensions. The standard recruitment questionnaire is developed based on the optimized results from the skill dimension construction table and the designer employability attribute table [7]. Five keywords, aesthetics, software, professional qualifications, manufacturing process and physical fitness are removed while personal charm and self-management are added.

Finally, the three design supervisors are given the structured survey which is based on the typical recruiting questionnaire. The questionnaire employs a seven-point Likert scale asking the interviewees to rate the importance of various ability attributes of the candidates. The results of this questionnaire are depicted in Figure 8.

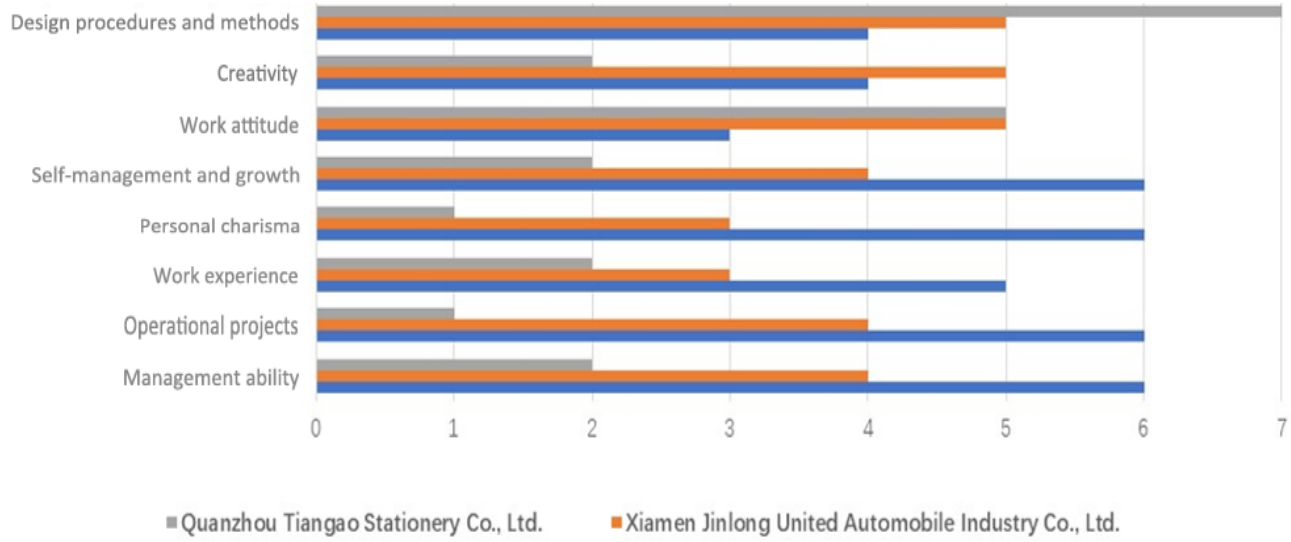

Figure 8.
Requirements of three representative enterprise for recruitment positions.

The table shows numerous interesting results. High independence and the capacity to lead projects or manage teams are valued by high-paying employers. They place a relatively lower emphasis on specific design and operational skills. Mid-salary companies seek candidates with solid execution abilities who can effectively promote the company's projects while they do not place high requirements on independence and specific operational skills. On the other hand, low-salary companies prioritize selecting individuals with strong practical and functional skills who can successfully carry out their tasks. In this case, there are no specific requirements for the candidate's inherent potential. This in-depth interview deviates from the findings of other research by emphasizing that high-paying organizations reward a broad variety of personal and professional skills. The emphasis on developing one's charisma and self-management skills is clear evidence. This aspect has received comparatively less attention in prior studies. It suggests that high-paying companies seek collaborative partners whose unique personal charm and management abilities can bring unexpected benefits to the organization. In contrast, low-paying companies prioritize recruiting tool-type partners whose personal charm and management capabilities exhibit higher substitutability, limiting the potential for significant salary increases.

5. Discussion

According to the research's findings, high-paying design positions primarily focus on addressing systemic issues within the company such as formulating design specifications, performance systems and strategies to manage projects and personnel effectively to ensure stable operations and foster iterative growth within the company.

Positions with medium salaries primarily tackle mobility-related challenges. This involves implementing the company's philosophy and practices through efficient work processes, design methods and innovative thinking to optimize work efficiency and drive overall productivity. Low-paying design positions are typically oriented towards addressing business problems. This includes using software tools, leveraging aesthetic advantages and demonstrating a positive work attitude to support the fundamental business processes of the company to achieve business growth and stability.

Designers and businesses collaborate in a symbiotic and advantageous way. Many companies acknowledge the value of investing in high-value design costs to drive their innovative development [19]. This research offers a viable growth path for individual designers in their career planning. It enables designers to enhance the specific skills enterprises require and improve the alignment between their capabilities and job applications. Simultaneously, it reduces the costs associated with trial and error for designers and enhances the clarity of their career planning.

6. Conclusion

6.1. Limitations and Recommendations

The study has several limitations such as:

Time limitation: The research relies on real-time recruitment data making the conclusions time-sensitive. Different conclusions may be drawn from different periods and locations.

Background restriction: Some recruitment advertisements may contain elements of false advertising regarding treatment and demand making it challenging to distinguish and eliminate errors.

Scope limitation: Online job advertisements primarily target individuals with specific qualifications while professionals in the middle of their careers may have different employment opportunities. Additionally, a significant amount of social recruitment occurs through internal referrals which impacts information transparency.

Object limitation: Due to the development of the education industry, the credentials, abilities and treatment standards for applicants are dynamically evolving. The research may not fully and objectively reflect the market's recognition of the value of designers.

Future researchers could address these limitations by collecting data at different stages within the same region or at the exact location across other areas to gain a macro perspective. Additionally, employing grounded theory methods and incorporating government data and scales can provide a deeper analysis of individual cases and enhance the understanding of the topic.

6.2. Research Trends

Previous research has frequently ignored the economic contributions made by particular designers in favor of the general social worth of design. However, understanding the salaries and benefits of designers is crucial for understanding the characteristics and challenges of the design industry as a whole. Objective data can provide insights into the sustainable development of the design industry.

Salary levels are indicative of the value placed on designers. They connect design education and career planning, influencing both ends of the spectrum. The fluctuation of salaries affects changes in both areas:

Design education: The research has implications for students' decision-making in choosing design education, training models, and market trends. Many institutions currently have a propensity to prioritize researching advanced subjects while ignoring the development of intermediate or skilled design abilities. As a result, there is a skills gap in high-end fields, which forces first-year design students to seek alternative jobs. Additionally, fresh graduates need time for adjustment to adapt from being design strategy makers encouraged by universities to becoming executors or innovators.

Personal growth of designers: The career planning of designers in the future should align with the national development strategy. Different positions and scales within industrial systems will have varying design requirements. Original brand manufacturers prioritize original innovation while actual design manufacturers value integration innovation. Original equipment manufacturers emphasize introduction, digestion, absorption and re-innovation. In essence, macro-industrial demands call for creativity, teamwork and business capabilities while micro-commercial orders require skills in imitation optimization, cost control and manufacturing processes.

In conclusion, the correlation analysis between salary and skills provides valuable support for the growth of individual designers, enterprise recruitment and the effective allocation of social resources. Quantitative data offers a reference for sustainable development in personal career planning, corporate group strategies and the comprehensive design education ecosystem.

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