

三、实施细则汇总

1. 《职业教育字体设计能力标准》

一、标准概述

标准名称：职业教育字体设计能力标准(Vocational Education Competency Standards for Type Design)

制定单位：广州城建职业学院（牵头），联合中国出口商品包装研究所、广东省工业设计协会、广东三维家信息科技有限公司及国内外行业专家。

适用对象：国内外职业院校视觉传达设计、数字媒体艺术、广告艺术设计等相关专业学生及字体设计从业者。

标准定位：本标准旨在界定字体设计领域高素质技术技能人才应具备的核心知识、技能与素养，为职业院校人才培养方案制定、课程开发、教学实施与人才评价提供依据，同时为行业企业人才招聘与认证提供参考基准，推动字体设计职业教育的标准化与国际化。

二、设计理念与原则

产教融合原则：标准内容源于行业企业真实岗位需求与工作流程，确保人才培养与产业应用无缝对接。

能力本位原则：以职业能力培养为核心，明确不同能力等级的具体要求，体现递进性。

国际兼容原则：标准制定参考了国际文字设计协会（ATypI）的技术规范及国际赛事（如德国红点、iF 奖）的评审标准，确保其国际通用性与先进性。

数字赋能原则：强调对数字化设计工具（如 Glyphs、FontForge）、

编程技术（Pythonfor 自动化处理）及人工智能辅助设计等现代技术的掌握与应用。

三、核心能力等级与要求

本标准采用“三阶递进”能力模型，与成果中的课程体系相呼应。

能力等级	能力描述	核心技能要求
L1:基础应用级	具备字体基础知识的理解能力，能正确使用现有字库字体完成商业设计项目。	<ol style="list-style-type: none"> 1.知识：掌握字体分类（衬线体、无衬线体等）、字腔、字怀、字面、重心等基本概念与术语。 2.技能：能根据不同设计场景（品牌、UI、海报）科学选用字体，并能进行基本的字距、行距调整与排版。 3.素养：建立版权意识，尊重字体知识产权。
L2:专项设计级	具备单一字族（如标准体、粗体）的完整设计能力，能遵循设计规范完成从草图到数字字体的实现。	<ol style="list-style-type: none"> 1.知识：深入理解字体结构、笔画特征、视觉修正原理及 Open Type 特性。 2.技能：掌握矢量软件（AI）和专业字体设计软件（Glyphs）的核心功能，能独立完成一套基础字族的数字化设计、拼合与导出。 3.素养：具备工匠精神，追求细节的完美与整体的和谐。
L3:创新开发级	具备开发完整商业字库项目的的能力，能主导或团队协作完成从概念策划、技术实现到市场应用的全流程。	<ol style="list-style-type: none"> 1.知识：掌握多文种字体设计匹配、字体品牌化策略、字库技术标准及市场需求分析。 2.技能：能运用 Python 等工具进行批量处理与质量检测；能领导团队完成包含不同字重、字宽的大型字库项目；能将字体设计与品牌、UI、动态设计深度融合。 3.素养：具备强烈的创新意识、项目管理和跨文化沟通能力，能将设计转化为商业价值。

四、实施与评价

教学建议：建议采用“项目引领、任务驱动”的教学模式，将企业

真实字库开发项目（如华为鸿蒙字体优化）融入课程，依托“虚拟仿真设计工坊”开展实训。

评价方式：采用“商业价值+国际认证”双轨评价。

商业价值：将学生完成的字库作品在商业项目中的应用率、用户下载量或产生的经济效益作为核心评价指标之一。

国际认证：鼓励学生考取国际认可的行业证书（如 1+X 数字媒体交互设计证书），并以国际赛事获奖（红点、iF、HiiTypography 等）作为能力达成的卓越标准。

五、推广与意义

本标准的制定与国际化推广，是中国职业教育标准“走出去”的一次成功实践。它不仅为全球职业院校字体设计人才培养提供了“中国方案”，更通过标准输出，促进了国际间设计教育交流，提升了我国在设计领域的国际话语权，充分体现了“产赛共育，数智赋能”教学成果的深远影响与极高价值。

六、实践案例：华为鸿蒙字库 HarmonyOS Symbol

项目周期：2023 年 12 月-2024 年 6 月

开发部门：华为消费者 BG 软件 UX 设计部

协作单位：方正字库、汉仪字库、广州城建职业学院艺术与
设计学院（汉字与文创设计研发中心）

技术总监：朱志伟

实践导师：李佛君、张锦源

参与学生：广告艺术设计 2022、2021 品牌数媒班，林颖、莫卓臻、何萍、吕振华、杨漫、瞿江涛、吴霞、曾文涛、钟依飒、黎铭熙

课堂学时：32 学时，2.5 学分

课外学时：320 学时,3.5 学分（项目制课外时长）

项目特点：华为鸿蒙字库 HarmonyOS Symbol 是国内首次实现以字库形式封装使用的 symbol 资源。通过统一视觉和简化操作，提升产品品质和创意水平，赋能品牌顶层设计。

L1 基础应用级：开发汉字识别特征

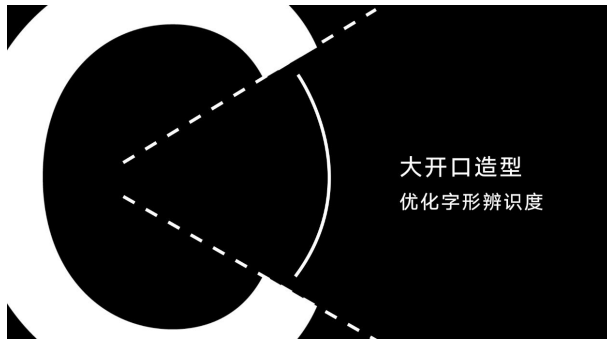
知识点：掌握字体分类（衬线体、无衬线体等）、字腔、字怀、字面、重心等基本概念与术语。



L2 专项设计级：

知识点：深入理解字体结构、笔画特征、视觉修正原理及 Open Type 特性。





L3 创新开发级：

知识点：掌握多文种字体设计匹配、字体品牌化策略、字库技术标准及市场需求分析。

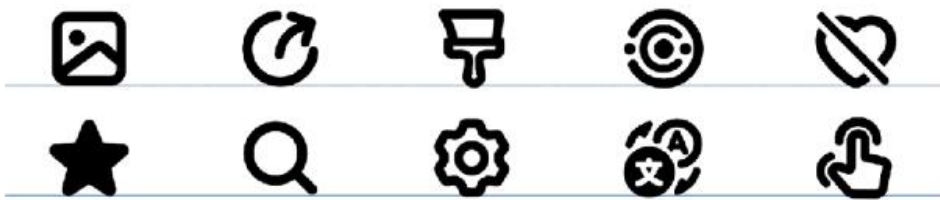


HarmonyOS Symbol 无缝集成 HarmonyOS Sans 字体，支持可变字体特性。用户调整字体粗细时，HarmonyOS Symbol 图标粗细和重量同步变化，确保设计元素一致，用户界面和谐，简化开发者的设计与调整步骤。

项目成果和技术指标：



1.1500+矢量图标库覆盖行业垂类：HarmonyOS Symbol 提供超过1500个高质量矢量图标，具备优异的可扩展性，任何大小和分辨率下都能保持清晰。图标库涵盖系统界面、文档编辑、媒体娱乐、电商支付、运动健康、自然天气和交通出行等，赋予开发者创作自由，打造独特且功能强大的个性化设计。



粗细随心变 Variable Font

2.与系统字体集成协调高效：HarmonyOS Symbol 无缝集成 HarmonyOS Sans 字体，支持可变字体特性。用户调整字体粗细时，HarmonyOS Symbol 图标粗细和重量同步变化，确保设计元素一致，用户界面和谐，简化开发者的设计与调整步骤。

单色 (SINGLE)



分层 (MULTIPLE_OPACITY)



多色 (MULTIPLE_COLOR)



3.支持分层定义百变随心: HarmonyOS Symbol 采用灵活的分层结构，确保图标在不同场景下的视觉一致性。图标的每个图层可独立设置颜色和灰度，便于快速调整配色方案，实现图标的统一视觉效果。同时，分层系统支持对单个图标的细致调整，提供高度个性化定制能力。



可变颜色



缩放



脉冲



消失



出现



弹跳



暂停播放切换



播放暂停切换

4.多样交互动画生动体验: HarmonyOS Symbol 支持 7 种动态效果，包括消失、出现、弹跳等预设动画，及多种原创动画。开发者可将这些动画与用户操作（如点击、长按、输入和数据传输等）匹配，

使图标成为互动组件，让用户动作获得更直观的反馈，提升用户交互体验。



全场景使用、多语言无级可变，助力构建万物互联的智能世界



项目成员参观华为消费者 BG 软件工程部 UX 设计部、实践设计团队

七、标准制定专家名录

序号	姓名	国家地区	单位/机构	职务/职称/学历
01	李佛君	中国	广州城建职业学院	教授/博士
02	王粤飞	中国	深圳市平面设计协会	名誉主席
03	朱志伟	中国	北大方正集团	高级技术专家
04	顾鹏	中国	中国设计师沙龙	执行主席

05	布鲁斯·达克沃斯	英国	Turner Duckworth	设计总监
06	小林章	日本	日本 Linotype 公司	设计总监
07	柯炽坚	中国香港	蒙纳字库（香港）公司	设计总监
08	郭炳权	中国香港	澳大利亚幸运广告集团	美术主任
09	何塞·斯卡廖内	阿根廷	阿根廷布宜诺斯艾利斯大学	教授/博士
10	鸟海修	日本	日本字游工房有限公司	设计总监
11	张圣焕	韩国	203 X Infographics Lap	设计总监
12	塞巴斯蒂安·比辛格	德国	德国不来梅艺术大学	教授
13	刘钊（女）	中国	中央美术学院	教授/博士
14	迈克尔·诺克斯	澳大利亚	澳大利亚葛瑞集团	首席创意官
15	洪骏业	中国澳门	澳门 MO-DESIGN 公司	设计总监
16	刘耕名	中国台湾	亚洲 Motion Design 集团	创意总监
17	余雅琳	新加坡	新加坡 Foreign Policy 集团	设计总监
18	色部义昭	日本	东京艺术大学	副教授
19	曹雪	中国	广州美术学院	教授
20	蒋华	中国	中央美术学院	教授
21	高冈昌生	日本	嘉瑞工房会社	董事长
22	陈嵘	中国	上海视觉艺术学院	教授
23	刘小康	中国香港	靳刘高创意策略设计公司	创始人/博士
24	马深广	中国	深圳共同设计有限公司	艺术总监
25	韩湛宁	中国	深圳亚洲铜设计有限公司	创作总监
26	王之纲	中国	清华大学美术学院	教授
27	向帆	中国	清华大学美术学院	教授
28	张弥迪	中国	杭州聿书堂设计有限公司	创始人

Core Content of Vocational Education Competency Standards for Type Design

I. Overview

Standard Name: Vocational Education Competency Standards for Type Design

Developing Organization: Formulating Unit: Guangzhou City Construction College (lead unit), in collaboration with the China National Export Commodities Packaging Research Institute, Guangdong Industrial Design Association, Guangdong 3D Home Information Technology Co., Ltd., Guangdong Packaging Technology Association, and industry experts from China and abroad.

Target Audience: Students in visual communication design, digital media arts, advertising art design, and related programs at domestic and international vocational institutions, as well as practicing type designers.

Positioning: This standard defines the core knowledge, skills, and literacy required for high-quality technical and skilled talents in the field of type design. It serves as a basis for developing talent cultivation programs, designing curricula, implementing teaching, and assessing competency in vocational education. It also provides a reference benchmark for industry recruitment and certification,

promoting the standardization and internationalization of type design education.

II. Design Philosophy and Principles

Industry-Education Integration Principle: Content is derived from the actual demands and workflows of industry positions, ensuring seamless alignment between talent cultivation and practical application.

Competency-Based Principle: Focuses on the development of vocational abilities, specifying requirements for different competency levels, demonstrating progression.

International Compatibility Principle: Development references technical specifications from the International Typeface Association (ATypI) and judging criteria from international awards (e.g., Red Dot, iF Award), ensuring global relevance and advancement.

Digital Empowerment Principle: Emphasizes mastery and application of modern digital design tools (e.g., Glyphs, FontForge), programming techniques (e.g., Python for automation), and AI-assisted design.

III. Core Competency Levels and Requirements

This standard adopts a "Three-Tier Progressive" competency model, corresponding to the achievement's curriculum system.

Competency Level	Description	Core Skill Requirements
L1: Foundational Application	Possesses understanding of foundational type knowledge and can correctly use existing font libraries to complete commercial design projects.	<ol style="list-style-type: none"> 1. Knowledge: Master basic concepts and terminology (serif, sans-serif, counter, stroke, x-height, stress, etc.). 2. Skills: Ability to scientifically select and pair typefaces for different design scenarios (branding, UI, posters) and perform basic kerning and leading adjustments. 3. Literacy: Establish copyright awareness and respect intellectual property rights of fonts.
L2: Specialized Design	Possesses the ability to complete a full type family (e.g., Regular, Bold), following design specifications from sketch to digital font implementation.	<ol style="list-style-type: none"> 1. Knowledge: Deep understanding of letterform structure, stroke characteristics, optical correction principles, and OpenType features. 2. Skills: Proficiency in core functions of vector software (AI) and professional font design software (Glyphs); ability to independently complete the digital design, hinting, and export of a basic type family. 3. Literacy: Possess a craftsman spirit, pursuing perfection in detail and overall harmony.
L3: Innovative Development	Possesses the ability to develop complete commercial font library projects, capable of leading or collaborating in teams to manage the entire process from	<ol style="list-style-type: none"> 1. Knowledge: Mastery of multi-script font matching, typographic branding strategy, font technology standards, and market demand analysis. 2. Skills: Ability to use tools like Python for batch processing and quality assurance; capability to lead teams in large-scale font library projects encompassing various weights and widths; ability to deeply integrate type design with branding, UI, and

Competency Level	Description	Core Skill Requirements
	conceptualization and technical implementation to market application.	motion design. 3. Literacy: Possess strong innovative thinking, project management, and cross-cultural communication skills; ability to translate design into commercial value.

IV. Implementation and Assessment

Teaching Recommendation: Adoption of a "Project-Led, Task-Driven" teaching model is recommended, integrating real-world enterprise font development projects (e.g., Huawei HarmonyOS font optimization) into the curriculum, utilizing the "Virtual Simulation Design Workshop" for practical training.

Assessment Method: Utilizes a dual-track assessment system of "Commercial Value + International Certification".

Commercial Value: The application rate of student-completed font works in commercial projects, user download volume, or generated economic benefits serve as core assessment metrics.

International Certification: Students are encouraged to obtain internationally recognized industry certificates (e.g., 1+X Digital Media Interaction Design Certificate). Achievement of international awards (Red Dot, iF, Hii Typography, etc.) is recognized as an exemplary standard of competency.

V. Promotion and Significance

The development and international promotion of this standard represent a successful practice of **exporting Chinese vocational education standards**. It provides a "**China Solution**" for global vocational type design education. Furthermore, through the export of this standard, it facilitates international exchange in design education and enhances China's international discourse power in the design field, fully demonstrating the profound impact and significant value of your teaching ("Industry-Competition Co-Education, Digital-Intelligence Empowerment").

VI. Case Study: HarmonyOS Symbol Typeface Project

Project duration: December 2023–June 2024

Developing unit: UX Design Dept., Consumer BG Software, Huawei Technologies

Co-operators: Founder Type, Hanyi Fonts, School of Art & Design, Guangzhou City Construction College (Chinese-Character & Cultural-Creative R&D Center)

Technical director: Zhu Zhiwei

Mentors: Li Fojun, Zhang Jinyuan

Participating students: From the Brand & Digital-Media classes of the Advertising Art & Design program (cohorts 2022, 2021), Lin Ying, Mo Zhuozhen, He Ping, Lü Zhenhua, Yang Man, Qu Jiangtao, Wu Xia,

Zeng Wentao, Zhong Yisa, Li Mingxi

In-class hours: 32 h, 2.5 credits

After-class hours: 320 h, 3.5 credits (project-based)

Project highlights: HarmonyOS Symbol is China's first symbol resource delivered and used as a native font library. By unifying the visual language and simplifying operations, it raises product quality and creative standards, empowering top-level brand design.

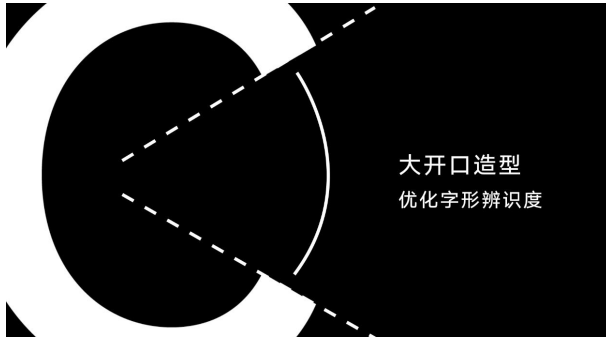
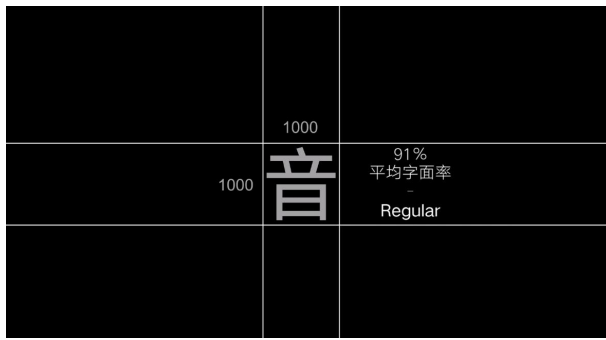
Level-1 (basic application): develop Chinese-character recognition features

Knowledge points: master fundamental concepts and terminology such as font classification (serif, sans-serif, etc.), counter, aperture, face, visual center, etc.



L2–Specialized Design Level

Knowledge points: in-depth understanding of typeface structure, stroke characteristics, visual-compensation principles, and OpenType features.



L3–Innovation & Development Level

Knowledge points: master multi-script typeface matching, font-driven branding strategy, font-technology standards, and market-demand analysis.



HarmonyOS Symbol is seamlessly integrated with the HarmonyOS Sans typeface and supports variable-font technology. When users adjust the font weight, the weight and stroke thickness of HarmonyOS Symbol icons change in lockstep, guaranteeing visual consistency, a harmonious UI, and fewer design-tuning steps for developers.

Project Outcomes and Technical Indicators:



1,500+ Vector Icon Library Covering Industry Verticals

HarmonyOS Symbol delivers more than 1,500 high-quality vector icons with outstanding scalability, staying crisp at any size or resolution. The library spans system UI, document editing, media & entertainment, e-commerce & payments, fitness & health, weather, and transportation, giving developers the creative freedom to craft distinctive, high-performance, personalized designs.



粗细随心变 Variable Font

Seamless & Efficient Integration with System Fonts

HarmonyOS Symbol is fully integrated with HarmonyOS Sans and supports variable-font technology. When users change the font weight, the icons' stroke thickness updates in perfect sync, guaranteeing visual consistency, a cohesive UI, and far fewer design tweaks for developers.

单色 (SINGLE)



分层 (MULTIPLE_OPACITY)



多色 (MULTIPLE_COLOR)



Layer-based definition for unlimited customization

HarmonyOS Symbol uses a flexible, layered architecture that preserves visual consistency across every scenario. Each layer of an icon can be assigned its own color or grayscale value, letting designers swap palettes in seconds while keeping the overall look unified. At the same time, the layer system allows pixel-level tweaks to individual icons, delivering maximum room for personalized refinement.



可变颜色



缩放



脉冲



消失



出现



弹跳



暂停播放切换



播放暂停切换

Rich animated interactions for a vivid experience

HarmonyOS Symbol ships with seven built-in motion presets—fade-out, fade-in, bounce, and more—plus an expanding set of original animations. Developers can bind any of these effects to user actions such as tap, long-press, typing, or data transfer, turning icons into interactive components that give immediate, intuitive feedback and elevate the overall user experience.



Universal across every scenario and infinitely variable in every language—empowering an intelligently connected world of all things.



Project members visited the UX Design Department of Huawei Consumer Business Group's Software Engineering Division and the practical design team.

VII. Expert List for Standard Formulation

No.	Name	Country/R	Institution/Organization	Position/Title/Educational Background
01	Li Fojun	China	Guangzhou City	Professor/Ph.D.
02	Wang	China	Shenzhen Graphic Design	Honorary Chairman
03	Zhu Zhiwei	China	Founder Group	Senior Technical

No.	Name	Country/R	Institution/Organization	Position/Title/Educational
04	Gu Peng	China	China Designers Salon	Executive Chairman
05	Bruce	UK	Turner Duckworth	Design Director
06	Akira	Japan	Linotype Japan Co., Ltd.	Design Director
07	Ke Chijian	Hong Kong,	Monotype Hong Kong	Design
08	Kwok Ping	Hong Kong,	Australia Lucky Advertising	Art Director
09	José	Argentina	University of Buenos Aires,	Professor/Ph.D.
10	Osamu	Japan	Kajiwara Kobo Co., Ltd.	Design Director
11	Jang	South	203 X Infographics Lap	Design Director
12	Sebastian	Germany	Bremen University of the	Professor
13	Liu Zhao	China	Central Academy of Fine	Professor/Ph.D.
14	Michael	Australia	Grey Group Australia	Chief Creative Officer
15	Hong	Macau,	MO-DESIGN Macau, China	Design Director
16	Liu	Taiwan,	Asia Motion Design Group	Creative Director
17	Yu Yalin	Singapore	Foreign Policy Group	Design Director
18	Yabe	Tokyo	Tokyo University of the Arts	Associate Professor
19	Cao Xue	China	Guangzhou Academy of	Professor
20	Jiang Hua	China	Central Academy of Fine	Professor
21	Takahoka	Japan	Karui Kobo Co., Ltd.	Chairman of the Board

No.	Name	Country/R	Institution/Organization	Position/Title/Educational
22	Chen	China	Shanghai Institute of Visual	Professor
23	Liu Siu	Hong Kong,	Kan & Lau Design Strategy	Founder/Ph.D.
24	Ma	China	Shenzhen Common Design	Artistic Director
25	Han	China	Shenzhen Asia Bronze	Creative Director
26	Wang	China	Academy of Arts & Design,	Professor
27	Xiang Fan	China	Academy of Arts & Design,	Professor
28	Zhang	China	Hangzhou Yushutang	Founder