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Designing Ceramics with Cultural Identity: The Practice of Atelier Nodus

Diseñando cerámica con identidad cultural: La práctica de Atelier Nodus

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Abstract

This article explores how cultural identity can be embedded in product design through the practice of Atelier Nodus, a ceramic studio based in El Salvador. By using a design-based qualitative methodology that combines practice-led experimentation, documentation, and reflective analysis, the studio examines historical ceramic traditions, materials innovation, and contemporary sustainability practices. Findings demonstrate that integrating local resources, ancestral techniques, and global design perspectives strengthens both product functionality and user connection while promoting sustainable business practices and the preservation of regional cultural heritage. Atelier Nodus contributes to current discussions on cultural identity in design by proposing a model in which material experimentation becomes a vehicle for preserving heritage and generating new creative value.

Keywords: *design, innovation, plastic arts, cultural heritage, customs and traditions.*

Resumen

Este artículo explora cómo la identidad cultural puede integrarse en el diseño de productos a través de la práctica de Atelier Nodus, un estudio de cerámica con sede en El Salvador. Mediante una metodología cualitativa basada en el diseño que combina la experimentación guiada por la práctica, la documentación y el análisis reflexivo, el estudio examina las tradiciones cerámicas históricas, la innovación en material y las prácticas contemporáneas de sostenibilidad. Los hallazgos demuestran que la integración de recursos locales, técnicas ancestrales y perspectivas de diseño global fortalece tanto la funcionalidad del producto como la conexión con el usuario, al mismo tiempo que contribuye a prácticas empresariales sostenibles y a la preservación del patrimonio cultural regional. Atelier Nodus contribuye a los debates actuales sobre la identidad cultural en el diseño al proponer un modelo en el que la experimentación con materiales se convierte en un vehículo para preservar el patrimonio y generar nuevo valor creativo.

Palabras clave: diseño, innovación, artes plásticas, patrimonio cultural, costumbres y tradiciones.

1. Introduction

In an era of globalization and rapid technological advances—where popular trends emerge and spread quickly via social media and influencers—consumers have access to new designs (colors, forms, and patterns) and products with improved functionality, often linked to shifting consumer values and lifestyles (Joyye, 2025). According to Global Market Insights (2025), it suggests that "the global ceramic tableware market size was estimated at USD 12.4 billion in 2024. The market is expected to grow from USD 13 billion in 2025 to USD 22.2 billion in 2034." At the same time, small traditional ceramic practices are in decline due to mass production and global market pressures, and the preservation of cultural identity has become a pressing concern across creative industries (United Nations Educational, Scientific and Cultural Organization [UNESCO], n. d.). Cultural identity, as defined by Li *et al.* (2025), refers to "the sense of affiliation and recognition that individuals or collectives associate with their culture, history, values, customs, and beliefs." For artisans and design studios—especially those rooted in craft traditions—infusing cultural identity into products is more than a branding strategy (Friel, 2020). It connects consumers to heritage, enhances authenticity, and aligns with values of sustainability and social responsibility (EL-Fattah Hanafy & Rahman Al-Rashoud, 2023). Furthermore, fostering a strong craft/artistic ecosystem could be a new choice for local development (Leonardi & Pareschi, 2025). This paper explores these ideas through the lens of ceramic design, a field that sits at the intersection of material culture, geography, and tradition. The objective of this research is to analyze how Atelier Nodus integrates cultural

identity into design through material experimentation, technical innovation, and cross-cultural dialogue.

1.1. Origins of Atelier Nodus: A Fusion of Diversity

At its core, ceramic design balances functionality and artistic expression through processes of shaping, firing, and glazing clay. Because clay is a naturally occurring material that varies across regions, its properties directly influence the technical possibilities and aesthetic outcomes of ceramic production—and ultimately, design itself.

Founded in 2020, Atelier Nodus was established around the concept of "Fusion of Diversity." The studio's name – Nodus, Latin for "knot" or "connection" – embodies the intention to tie together cultural diversity through each piece. The studio's vision is to create work that embraces and reflects cultural influences from different parts of the world, emphasizing their unique beauty and sensibility. This vision emerged from an extensive intercultural journey that spans ceramic hubs such as Jingdezhen (China), Celadon workshops (Thailand), Talavera studios (Mexico), Mashiko (Japan), Faenza (Italy), Lenca pottery traditions (Honduras), and the artisan towns of Guatajiagua and Ilobasco (El Salvador.) By implementing this approach, the studio developed customized ceramic materials—formulating clays and glazes suited to specific technical and aesthetic goals. This practice is further informed by an academic background in the United States and a commitment to high-temperature firing, which enhances both the durability and expressive potential.

2. Methodology

This research adopts a design-based qualitative methodology grounded in practice-led experimentation and reflective analysis. The Atelier Nodus case study integrates documentation, observation, and iterative testing of materials, forms, and surface finishes. Following Li *et al.* (2025), who highlight the role of innovation in preserving traditional handicrafts, the study aligns empirical experimentation with cultural inquiry. Three stages structured the process: (1) material development through clay formulation and glaze testing using local resources; (2) product design and fabrication emphasizing cross-cultural influences, (3) analytical reflection, by relating the experimental outcomes to concepts of cultural identity, usability, and sustainability. The methodological approach draws from EL-Fattah Hanafy & Rahman Al-Rashoud (2023), who connect modular design strategies with the reinterpretation of cultural significance. Data collection included studio records, photographs, and technical logs, emphasizing how design processes can translate cultural identity into tangible form.

2.1. Material development through clay formulation and glaze testing using local resources

Global ceramic traditions demonstrate a strong correlation between available materials and the evolution of regional ceramic styles. Cities like Jingdezhen (China), Stoke-on-Trent (UK), Arita (Japan), and Limoges (France) became famous for porcelain due to access to high-quality kaolin clay. Likewise, regions rich in earthenware or stoneware developed distinctive forming, firing, and decorative methods suited to local resources.

In El Salvador, rich and diverse ceramic traditions continue in regions such as:

- Guatajiagua – black pottery
- Ilobasco – miniature and painted ceramics
- Quezaltepeque – green pottery
- Santo Domingo Guzmán – red pottery

However, much of this work remains based on low-fired bisque pottery, which tends to be fragile. Atelier Nodus addresses this by developing high-quality clays and high-fired glazes using locally sourced materials.

2.1.1. Clay Development

The table below presents a series of clay tests using raw materials sourced from Guatajiagua and Ilobasco. It documentsexperimentsthatanalyzeclay'scharacteristics such as shrinkage, porosity, and composition at two key firing stages: cone 06 (995°C–1011°C) for bisque firing and cone 6 (1220°C–1222°C) for glaze firing—temperatures commonly used in studios for functional and economical purposes.

Figure 1

Clay testing record

		guatajiagua						Ilobasco									
		barro amarilla		Barro Negro		mix		colorado		Amarillo		Arcilla Blanca	Barro amarillo x arcilla blanca		barro colorado x arcilla blanca	
	characterlistics before bisque	plastic enough to hold together, but it is hard to handbuild but surface texture is smooth, it is easy to bend		plastic enough to get hold together, but it is not so well for shaping, surface texture is rough		half barro amarillo and barro negro without sand, it is easy to shape		dark yellow, when it is added water, it gets brown color, it is plastic enough to shape		yellow color, when it is added water, it gets light brown, it is plactic enough to form		it cannot form any form by itself	50% of Barro amarillo x 50% of arcilla blanca. it is plastic enough to form		50% of Barro colorado x 50% of arcilla blanca. it is plastic enough to form	
clay condition	wet clay	10	100	10	100	10	100	10	100	10	100	n/a	10	100	10	100
	bone dry	9.3	80	9.5	81	9.3	82	8.9	82	9.2	78	n/a	9.3	81	9.3	76
	bisque fire cone 06	9.2	70	9.5	74	9.3	73	7.9	65	8.6	64	n/a	8.7	72	9	68
	glaze fired cone 1	9	70	9.2	74	9.1	73	7.8	65	7.9	63	n/a	8.5	72	8.6	67
	cone 6	8.9	70	8.9	74	8.9	73	7.6	65	7.8	63		8.5	72	8.5	67
shrinkage	wet to bone dry	7.00%	20.00%	5.00%	19.00%	7.00%	18.00%	11.00%	18.00%	8.00%	22.00%	n/a	7.00%	19.00%	7.00%	24.00%
	cone 06	1.08%	12.50%	0.00%	8.64%	0.00%	10.98%	11.24%	20.73%	6.52%	17.95%	n/a	6.45%	11.11%	3.23%	10.53%
	cone 1	2.17%	0.00%	3.16%	0.00%	2.15%	0.00%	1.27%	0.00%	8.14%	1.56%	n/a	2.30%	0.00%	4.44%	1.47%
	cone 6	1.11%	0.00%	3.26%	0.00%	2.20%	0.00%	2.56%	0.00%	1.27%	0.00%		0.00%	0.00%	1.16%	0.00%
	Total	11.00%	30.00%	11.00%	26.00%	11.00%	27.00%	24.00%	35.00%	22.00%	37.00%		15.00%	28.00%	15.00%	33.00%
Porocity	cone 06 (1H)	18.57%	83	16.22%	86	16.44%	85	18.46%	77	17%	75	n/a	14%	82	16%	79
	cone 06 (12H)	0.00%	83	0.00%	86	0.00%	85	1.30%	78	0%	75	n/a	0%	82	1%	80
	cone 1 (1H)	18.57%	83	8.11%	80	13.70%	83	4.62%	68	2%	64		6%	76	12%	75
	cone 1 (12H)	4.82%	87	3.75%	83	1.20%	84	5.88%	72	5%	67		4%	79	3%	77
	Total cone 1	19.54%		10.84%		13.10%		9.72%		5.97%			9%		13%	
	cone 6 (1H)	12.86%	79	5.41%	78	10.96%	81	4.62%	68	2%	64		4%	75	9%	73
	cone 6 (12H)	0.00%	79	1.28%	79	2.47%	83	4.41%	71	2%	65		3%	77	1%	74
	Total cone 6	11%		6%		12%		8%		3%			6%		9%	

Note. Screenshot of glaze testing record.

A major challenge in the development of these clay bodies was modifying traditional preparation techniques to function under high-fire conditions. In many Latin America regions, it is common practice to add sand to clay, as it increases the clay's strength, reduces cracking by minimizing shrinkage during drying, and enhances resistance to thermal shock from rapid temperature changes. While effective for low-fired ceramics, it becomes problematic when exposed to higher temperatures—the sand does not vitrify, leading to brittle textures and reduced structural integrity.

In order to resolve this, the studio employed elutriation, a technique using water to separate and remove coarse particles from the clay. This refinement yielded a more cohesive and pure clay body capable of withstanding high temperatures without compromising strength or surface quality. In addition, a method of clay aging was introduced—allowing the clay to mature for three to six months. This practice, inspired by traditional Japanese ceramic methods, encourages beneficial microbial activity that enhances the clay's physical properties. Over time, the clay becomes smoother, more pliable, and evenly hydrated, making it more consistent during forming and more reliable throughout the entire firing cycle.

2.1.2. Glaze Development

Glazing plays a dual role in ceramics: it protects the surface and enhances its aesthetic qualities. While commercial glazes are readily available, Atelier Nodus took a material-first, experimental approach to glaze development—driven by both necessity and a desire to localize production. In Central America, there is limited historical precedent for high-fired glazed ceramics. Thus, developing custom glazes from local or raw materials, without relying on imported frits, posed both an opportunity and a challenge. The studio began by testing locally available materials—feldspar, kaolin, silica, calcium carbonate, and talc —and comparing them with imported equivalents. For example, U.S.-sourced feldspars such as G-200 and Kona F-4 differ chemically from locally purchased Na-K feldspar (Figure 2), affecting glaze formulation. Similarly, local kaolin (KT 400, Promisa, Mich SA) has higher silica content than EPK (Edgar Plastic Kaolin commonly used in the United States) (Figure 3), influencing glaze melting behavior. Each material was analyzed for its chemical response during firing.

Figure 2

Material Analysis of Feldspars

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
				SiO	AlsO3	K2O	Na2O	MgO	CaO	Li2O	TiO2	Fe2(	Mol Wt	L.O.I
Feldespars		potassium	Madoc	67.4	18.2	7.8	5.6		0.5			0.1	547.62	
Feldespars		potassium	G-200	66.5	18.6	10.8	3		0.8			0.1	560.19	
Feldespars		potassium	Imperial	66.5	18.5	12.4	2.3		0.3				575.08	
Feldespars		potassium	Kingman	66.5	18.4	12	2.7		0.1			0.1	577.67	
Feldespars		potassium	Buckingham	66.3	18.4	11.8	2.7		0.4			0.1	566.44	
Feldespars		potassium	Fukushima	65.4	19.2	9.8	4.6	0.2	0.3			0.1	526.34	
Feldespars		potassium	Harshaw	65.4	19.6	12.1	2.2	0.3	0.4				558.82	
Feldespars		potassium	Keystone	64.8	19.9	12.2	2.5		0.2				575.92	
Feldespars		Sodium	対州長石	79.63	12.48	0.42	6.35	0.04	0.39					0.52
Feldespars		Sodium	Sil-O-Spar	77.6	13.5	2.9	4.9		1.1			0.1	781.96	
Feldespars		Sodium	釜戸長石	75.53	13.72	5.38	4.04	0.02	0.48					0.78
Feldespars		Sodium	Godfrey	71.7	16.5	4.6	5.3	0.9	1				570.18	
Feldespars		Sodium	Na-K Feldsparto	70.5	16.7	7.28	4.58		0.34			0.15		
Feldespars		Sodium	NC-4	68.5	18.9	4.1	6.9		1.4			0.1	557.18	
Feldespars		Sodium	C-6	67.5	19	5.4	6.8		0.9			0.1	543.93	
Feldespars		Sodium	Unispar 50	67.3	19.4	4.9	6.7		1.5			0.1	533.98	
Feldespars		Sodium	Glaze spar #54	67.1	21.2	1.5	9.1		1.1				548.41	
Feldespars		Sodium	Kona F-4 (Minspar	66.9	19.7	4.5	7		1.8				517.95	
Feldespars		Sodium	平津長石	65.99	19.92	6.34	5.85	0.42	0.57					0.61
Feldespars		Sodium	Nepheline Syenite	56.5	24.2	9.1	8.1		0.1			0.1	404.8	
陶石		陶石	天草陶石	78.93	14.7	2.9	0.06	0.03	0.05					

Note. Screenshot of glaze testing record.

Figure 3

Material Analysis of Kaolin

				SiO	AlsO3	K2O	Na2O	MgO	CaO	Li2O	TiO2	Fe2(	Mol Wt	L.O.I
Clay	Kaolinate	Fireclay	Lincoln 60	49.43	26.35	1.54	0.19	0.16	tr.		2.65	1.62		9.72
Clay	Kaolinate	Fireclay	Laterite	32.5	29.3			1.5	0.3		1.5	24		
Clay		Kaolin	Kyanite	44-38	54-60			0.01			0.67	0.40-1.16		0.21
Clay		Kaolin	Mullie(calcined)	44-38	54-60			0.01			0.67	0.36-.90		
Clay		Kaolin	KT 400	81.6	10.27	3.75	0.77	0.24	2.01			0.67		
Clay		Kaolin	Promisa	71.98	12.95	5.68	0.91	0	0.95					6.9
		Kaolin	Mich. SA	63.41	13	4.26	0.69	0.07	2.84			0.83		
Clay		Kaolin	伊賀木節	56.44	26.34	1.39	0.22	0.28	0.25		0.67	1.61		12.51
Clay		Kaolin	Calcined Glomax	52.8	44.6	0.1	0.3	0.2	0.05		1.6	0.4		
Clay		Kaolin	伊賀蛙目	51.88	29.44	1.09	0.16	0.29	0.27		0.71	1.99		13.92
Clay		Kaolin	土岐口蛙目	48.3	34.67	1.05	0.17	0.22	0.16		0.47	1.06		6
Clay		Kaolin	Grolleg-English	48	37		0.1	0.3	0.06		0.02			12.2
Clay		Kaolin	ニュージーランドカオリン	47.8	36.8	0.02	0.1	0.11	0.11					14.65
Clay		Kaolin	本山器節	47.37	34.41	0.64	0.08	0.22	0.16		0.92	1.1		14.91
Clay		Kaolin	6-Tile	46.9	38.2		0.04	0.58	0.43		1.42	0.35		13.9
Clay		Kaolin	EPK	46.5	37.62	0.4	0.02	0.16	0.25		0.36	0.51		13.77
Clay		Kaolin	Lone	45.8	37.8	0.3K2O and Na2O		<0.1	<0.1		2.1	0.5		13.4
Clay		Kaolin	高嶺 (Kaolinite)	45 - 47	33 - 39	0.25 - 0.80	0.01 - 0.17	0.01 - 0.10	0.01 - 0.07		0.25 - 0.37			
Clay		Kaolin	韓国カオリン	45.57	38.96	0.26	0.46	0.23	0.95					12.72
Clay		Kaolin	Velvacast	45.42	38.92	tr.		0.18	0.24		1.43	0.34		13.81

Note. Screenshot of glaze testing record.

Through iterative testing and reformulation, the studio developed a stable base glaze suitable for further experimentation. This base served as the foundation for variations involving natural oxides, opacifiers, and texture modifiers. The resulting glazes met technical standards and aligned with the studio's design language—bridging traditional inspiration with contemporary expression.

Figure 4

Glaze testing record

Number	surface	Photo	Name	Feldespato	Silica	Borax	Kaolin	Bentonita	Calcium Carb	Marble Dust	Soda Ash	Lithium carbonate	Zinc Ox	White Talco	Local Ash	Frit 3110	Frit 3124	Chorm oxide	Silicate zircon	Zircopax	Cobalt ox	copper	Manganese	Titanium dioxide	Tin Oxide	iron OX	chemical composition	Al2O3	SiO	KNaO	CaO	MgO	ZnO	B2O3	comment 1	comment 2
7	stone matte		SM 2	30	20	5	10		19				2	18													0.15 KNaO 0.44 CaO 0.34 MgO 0.06 B2O3 0.05 ZnO	1	16	0,15	0,44	0,34	0,05	0,06	nice stony matte but it has bubbles where applied thick	
8	stone matte		SM 3	35	15		15		15					10													0.20 KNaO 0.51 CaO 0.27 MgO	1	12,96	0,2	0,51	0,27	0	0	very dry matte, tiny bubbles	
9	matte		SM 4	33	16		15		12				5	10													0.17 KNaO 0.38 CaO 0.25 MgO 0.18 ZnO	1	13	0,17	0,38	0,25	0,18	0	nice smooth matte, tiny crackles	
10	matte		Crystal Matte (CM)	30	10	5	5		10				3	15													0.19 KNaO 0.31 CaO 0.37 MgO 0.11 ZnO 0.08 B2O3	1	13,3	0,19	0,31	0,37	0,11	0,08	nice soft matte glaze/ bit crackles	
11	matte		Test 31	40	30		15		15				10														0.19 KNaO 0.43 CaO 0.38 ZnO	1	13	0,19	0,43	0	0,38	0	it melted, but stayed matte/off white. It has tiny bubbles and crackles. When red oxide is applied underneath, it becomes stony matte. When it is applied like china paint, it stays reddish brown	
12	matte		Test 31-1	40	30		15		15				1														0.29 KNaO 0.64 CaO 0.05 ZnO	1	13	0,29	0,64	0	0,05	0	white/matte when it is applied thin, it is dry but when it is applied thick, it got more softer	
13	glossy		Test 1	20	20	20	20		20																		0.31 KNaO 0.67 CaO 0.34 B2O3	1	14,9	0,31	0,67	0,01	0	0,34	it melted well and its not runny. It does not have crackles. It has a milky effect. Its better to appy thinner	iron blue appears

Note. Screenshot of glaze testing record.

2.2. Product design and fabrication emphasizing cross-cultural influences

In contemporary design, there is a growing interest in reimagining cultural identity—through forms, colors, patterns, and symbols that carry meaning and tradition. Whether through reinterpretation or fusion, designers often explore ways to merge different cultural narratives into a single object—balancing reinterpretation with preservation (Sustainability Directory, 2025).

2.2.1. Cross-cultural usability

A helpful concept here is cross-cultural usability—the practice of designing objects or experiences that are intuitive and meaningful across cultural contexts. A seemingly simple object like a ceramic bowl can reveal striking differences when viewed through this lens. Though bowls exist in nearly every culture, their form, function, and meaning vary widely depending on local customs and usage.

Take, for example, two bowls—one from Guatajiagua, El Salvador, and one from Seto, Japan. The Guatajiagua bowl, traditionally used for soup, is made with locally sourced clay and finished using "Rusiado," a naturally fermented liquid made from nacascol seeds and nance fruit skins. This technique is applied directly after firing to seal the surface and deepen the color. The form is wide-mouthed, thick-walled, footless, and consistent in thickness throughout—well-suited to being left on the table while the user eats with a spoon.

Figure 5

Bowl from Guatajiagua

Note. Photography from Ruta de Paz, n. d.

Figure 6

Bowl from Seto

Note. Photography from Minne to Monozukuri, n. d.

In contrast, a Seto bowl, shown above, is used for rice and has a more vertical profile. Its base tapers inward, and it features a distinct foot ring, allowing it to be easily lifted during meals—a common Japanese eating practice. The top is lighter, while the bottom is thicker to maintain balance. The region of Seto is also known for its early use of high-fired glazes, and its ceramic industry has expanded beyond tableware to include architectural ceramics and industrial components.

Although both objects are "just bowls," they reflect different cultural behaviors, values, and worldviews. At its essence, design responds to how people live—both functionally and symbolically.

2.3. Analytical reflection, relating the experimental outcomes to concepts of cultural identity, usability, and sustainability.

At Atelier Nodus, this material understanding underpins a design philosophy centered on the "Fusion of Diversity." The studio seeks to create functional objects that honor local culture while engaging with global ceramic traditions. This philosophy is embodied in a range of creations—including bowls, salsa bowls (salseros), salad bowls, plates, cups, flower vases, jewelry boxes, and candle holders—each designed with careful attention to local usage habits and aesthetic preferences, particularly within the Salvadoran context.

Figure 7

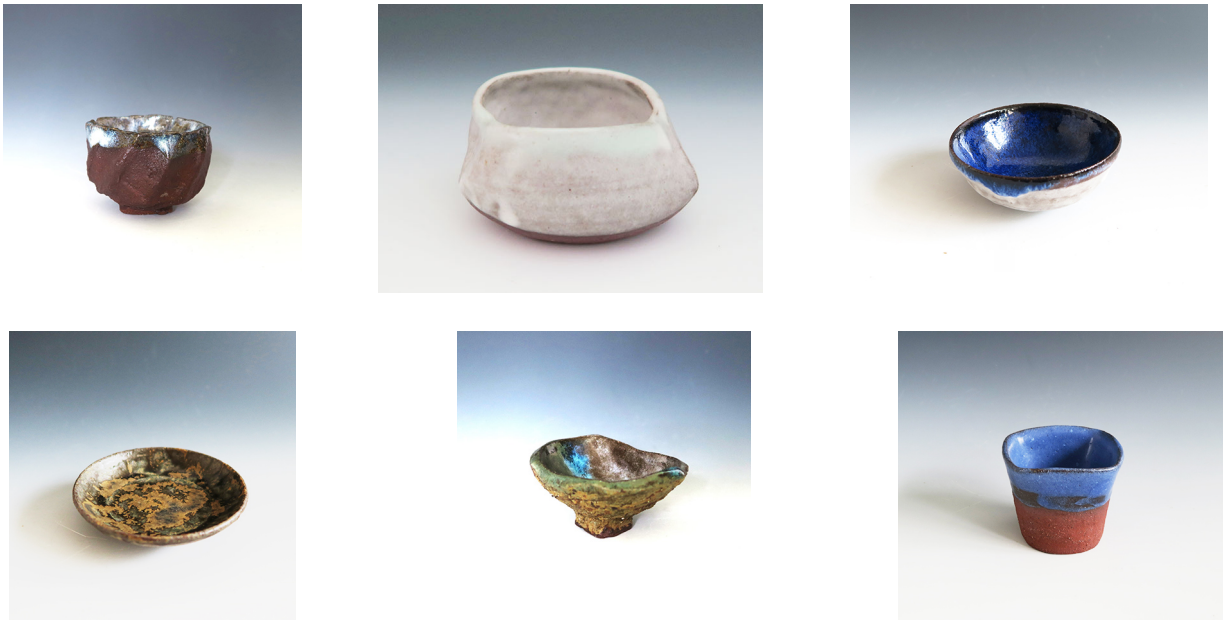
Examples of bowls, salad bowl, cup, jewelry box and candle holder

Note. Original photograpic images of products of Atelier Nodus.

Salseros and small plates are staples of local dining culture, and the studio produces a wide variety of them to match both traditional functions and contemporary aesthetics.

Figure 8

Examples of salseros and small plates



Note. Original photograpic images of products of Atelier Nodus.

Tripod forms, prevalent in Mesoamerica, are reinterpreted using modern techniques and glazed finishes rather than traditional slips.

Figure 9

Examples of tripod form

Note. Original photograpic images of products of Atelier Nodus.

Burnishing techniques, still practiced across Central America, are blended with modern glaze chemistry to explore new surface expressions.

Figure 10

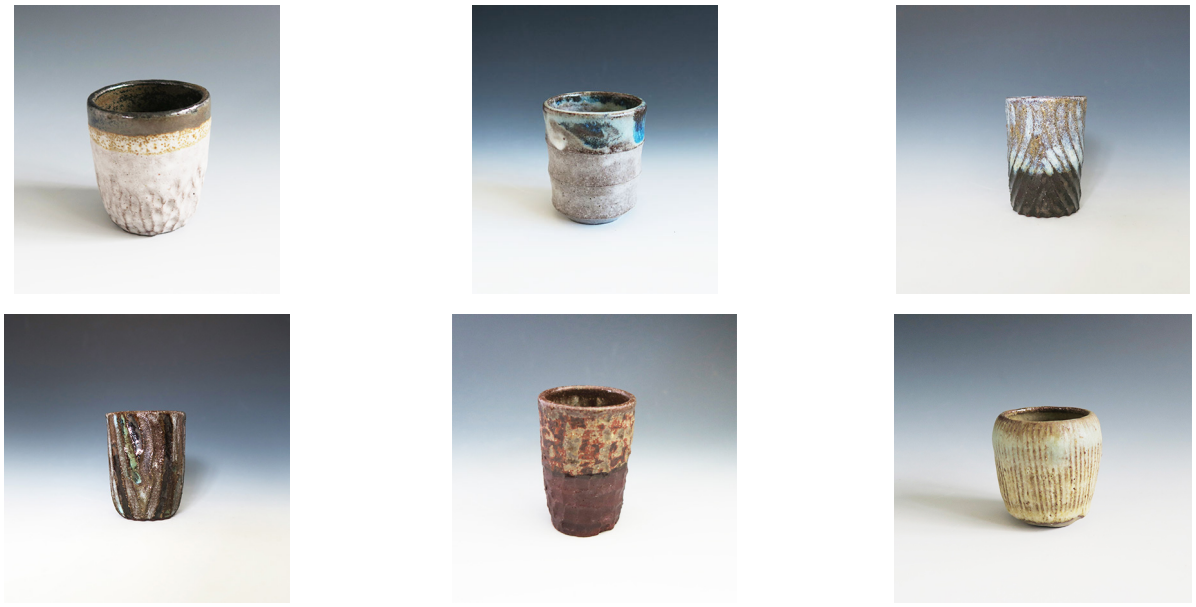
Examples of burnished works

Note. Original photograpic images of products of Atelier Nodus.

Shot glasses are produced with color schemes inspired by Pre-Columbian dichrome, and polychrome aesthetics. While the historic color palette favored orange, red, black, and white, our exploration extends into new combinations depending on material availability and visual experimentation.

Figure 11

Examples of shot glass

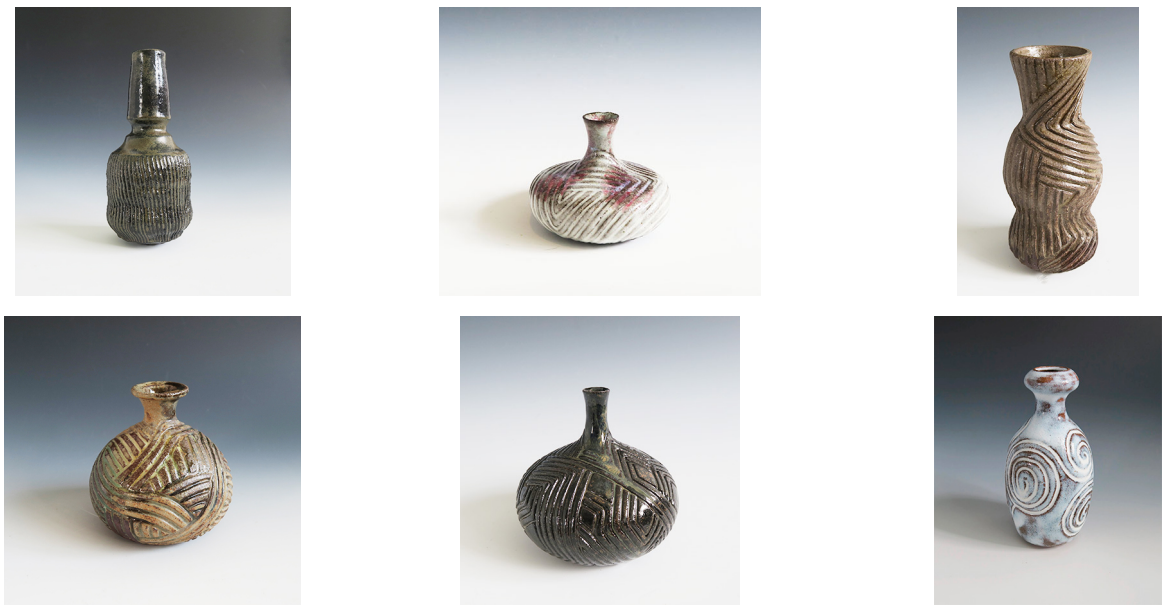


Note. Original photograpic images of products of Atelier Nodus.

The Ichirin-Zashi (一輪挿し) series exemplifies this synthesis. Inspired by the Japanese single-flower vase, it features Mesoamerican-style geometric carvings—bridging two cultural expressions in one object.

Figure 12

Examples of Ichirin-Zashi



Note. Original photograpic images of products of Atelier Nodus.

Similarly, a series of Chawan (茶碗), Japanese tea bowls, follows this fusion approach.

Figure 13

Examples of Chawan

Note. Original photograpic images of products of Atelier Nodus.

As part of its sustainable practice, Atelier Nodus also produces recycled glazes. Leftover glaze materials from testing or small batches are repurposed to create unique finishes—minimizing waste while celebrating unpredictability. The result is a one-of-a-kind surface reflecting both material economy and aesthetic exploration. The pictures below are examples of the same recycled glaze at different firing which resulted in different color.

Figure 14

Examples of recycled glazes applied

Note. Original photograpic image of products of Atelier Nodus.

3. Results

Experimental testing led to significant technical and aesthetic advancements. The studio developed durable high-temperature stoneware clays and glazes tailored to regional resources, enhancing both structural strength and visual appeal. Refinement of clay through elutriation and aging improved plasticity and surface quality, aligning with similar craft-based material studies (Natori *et al*., 2019). Glaze experiments produced a stable high-fire base glaze derived from local minerals, which was subsequently modified with oxides to achieve varied colors and textures.

These results provide the foundation for interpreting how technical advancements support cultural identity within Atelier Nodus's design framework, as discussed in the next section.

4. Discussion

The practice of Atelier Nodus demonstrates that material innovation and cultural identity can coexist harmoniously within contemporary design. As Li *et al*. (2025) observes, modern craft practitioners navigate between local heritage and global creative networks, often redefining their identity through experimentation. Similarly, Atelier

Nodus positions Salvadoran ceramic heritage within a cosmopolitan design narrative, demonstrating that hybridization fosters relevance and innovation.

As Friel (2020) notes, contemporary craft occupies an essential position in the creative economy, balancing tradition with market innovation. This perspective strengthens the understanding of Atelier Nodus's dual cultural–economic role within its regional and global context.

EL-Fattah Hanafy & Rahman Al-Rashoud (2023) notes that modular thinking in design allows traditional aesthetics to adapt to new contexts without losing authenticity—a principle visible in Atelier Nodus's iterative process. Moreover, Leonardi and Pareschi (2025) highlight how craft entrepreneurs create socio-cultural ecosystems that revitalize heritage through innovation and community engagement. In this light, the studio's approach contributes not only to artistic advancement but also to regional development and identity preservation. By integrating sustainability with cross-cultural aesthetics, Atelier Nodus redefines the potential of ceramics as both functional design and cultural narrative. These insights are directly aligned with the research objective of understanding how cultural identity can be embedded in contemporary ceramic design through material and technical innovation.

5. Conclusion

The paper demonstrates how Atelier Nodus integrates cultural identity into contemporary ceramic design through localized material development, cross-cultural analysis, and sustainable studio practices. By examining the technical transformation of clay and glaze materials in El Salvador and comparing functional forms across cultures, the research shows that material experimentation can serve as a meaningful pathway for expressing and reinterpreting identity. The findings align with recent discussions emphasizing that cultural heritage evolves through continuous innovation and the thoughtful adaptation of traditional knowledge. While this study focuses on a single studio practice, broader research across diverse ceramic communities and enterprises in El Salvador would deepen understanding of how cultural identity is constructed within the region's creative landscape. Ultimately, this work contributes to ongoing conversations about the fusion of tradition and modernity, highlighting how the historical transmission of techniques and values forms an essential foundation for future innovation in ceramic craft.

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