

THE IMPACT OF STAGE TRADITION DERIVED ROLE-PLAY ON DESIGN THINKING PEDAGOGY

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ABSTRACT

Design education often employs embodied approaches such as role-playing to foster inclusivity and empathy. However, achieving psychologically and physically embodied empathy remains challenging. This study explores how role-playing in interdisciplinary design education can benefit from long-established stage traditions. We review previous role-play practices in design and apply a theatre-based method through a comparative case study. A two-day intensive Design Thinking course was delivered to two interdisciplinary university cohorts (2024: n=22; 2025: n=18). In 2024, conventional design skits were used for final presentations. In 2025, the programme was co-taught by a theatre-trained facilitator, adapting Konstantin Stanislavski's psychological character analysis to design pedagogy. This method integrates user needs with psychological motivations to embed narrative depth in service interactions. Surveys assessed interests, team contributions, learning gains, project outcomes, and free comments. Results indicate that the 2025 cohort emphasised embodied emotional understanding and relational designs more strongly than the task-focused cohort of 2024. Project themes shifted from infrastructural solutions to equity, diversity, inclusivity, and well-being (e.g., recharge zones, nature immersion, disability support). The findings suggest that integrating stage-based design can significantly influence the student output and learning outcomes. Future research should examine integration within a broader design curriculum.

Keywords: Inclusivity, empathy, stage, theatre, design education

1 INTRODUCTION

1.1 Inception of Psychological Theatre + Lack of Clarity in Role Plays of DT

Today, design education increasingly addresses equity, diversity, and inclusion; with that, pedagogical approaches must also move beyond procedural tool instruction toward deeper psychological and relational understanding.

Design Thinking (DT) is understood as an iterative approach to design education that looks for the needs of the end-user via multiple methods, and ideas are generated, tested, and revised based on user feedback (Carroll et al., 2010) [1]. In this study, Design Thinking also refers to the title of the two-day intensive course examined. In design education, theatre-inspired methods often are used in the form of role-play, and it appears as a common method in design-resource toolkit repositories. Facilitators may also use improvisation, costumes, props and warm-up activities (designkit.org, Simsarian, 2003) [2]. The pedagogical merit of role-play remains unclear.

In the 20th century, Konstantin Stanislavski created a method of character analysis based on psychology - *perezhivanie* or “experiencing in performance”. In this method, the actor aligns their psyche with an imagined one of a character and sustains a continuous inner life. This approach has been discussed as a way to build creative understandings of users in design research (Postma et al., 2010) [3].

1.2 Current Methods to Cultivate Empathy

In previous research, the skills of developing empathy for users and capturing their needs in a human-centred way require learning over time. It is reflected as a process of cultivation within and outside the theatre's scope. In past studies theatre methods were explored for cultivation of empathy in design contexts. For example, Saito et al. (2022) [4] used storytelling and Forum Theatre as a way of encouraging reflection on emotions and wicked problems in DT-inspired workshops. Liu et al. (2024) [5] used empathy-focused experiential learning as part of design education through the 4E framework (Experience, Empathy, Exploration, and Evaluation) over a 10-week implementation through 2-hour

weekly sessions. However, intensive DT courses often lack the extended implementation periods used in previous studies, raising the question of whether shorter empathy-oriented interventions could also be effective.

1.3 Stanislavski's Character Analysis for Design Pedagogy

Stanislavski supported the idea by dividing the role creation into smaller units or “bits”, during which a specific task stemming from a character’s inner necessity is performed (example: “I want to... in order to...”) (Hobgood, 1973 pp.150-151) [6]. His character analysis has been suggested as a method for architectural design by systemising imagination and creativity across disciplines (Öztek and Erkılıç, 2026) [7]. Authors introduced the concept of *vitalness*, which underscored two Stanislavskian exercises for character analysis: *given circumstances* and *magic if*. Vitalness is explained by Oztek & Erkilic as a common ground between architecture and theatre’s ability to create a multi-layered milieu of dynamic life. Research on the comparative effects of Stanislavski-inspired role-play on DT workshop participants remains scarce, however. This study examines whether Stanislavski-inspired role-play affects beginner university students’ engagement with empathy and user understanding within a two-day DT course. We surveyed participants with open-ended questions to investigate their outlooks after the workshop. Through analysis of qualitative data and visuals, the study asks the following question: Does Stanislavski-inspired role analysis increase: (a) specificity of user characterisation (b) specificity of product/service features, and (c) expressed empathic reasoning?

1.4 Comparison of Existing Role Play Precedents and Stanislavskian Theatre Use

Prior work has identified the usefulness of role-play for visualisation and systemisation; however, the participants remained more presentation-oriented rather than psychologically engaged with the users (Boess, 2006) [8]. Stanislavski-derived character analysis may lead to a more exploratory way of role-play via the emphasis on user motivation and embodied perspectives. Therefore, this study asks whether Stanislavski-inspired facilitation can deepen empathic reasoning of early DT course learners.

2 METHODS

2.1 Study Design

A comparative design case study was conducted on two consecutive two-day intensive Design Thinking (DT) courses (2024: n=22; 2025:18). The course was offered as part of curriculum in interdisciplinary science and innovation field at the undergraduate level.

Participants were primarily third-year undergraduate students at (institution Z) taking an interdisciplinary innovation and science curriculum. Approximately three-quarters of participants were Japanese, while the remaining participants were international students, primarily from China and Taiwan, with an approximately equal gender distribution.

Both cohorts were exposed to the same team-based syllabus and learning objectives. The schedule followed a Double Diamond structure, with Day 1 focusing on problem space and Day 2 on solution development.

The main difference between the cohorts was the pedagogical treatment of role-play.

In 2024, participants used a conventional skit form to present design. In 2025, the course was co-taught by the Author 1, a formally trained theatre director, who introduced Stanislavski’s character psychology analysis into the DT process.

It was examined whether the intervention influenced:

- (a) specificity of user characterisation
- (b) specificity of product/service features
- (c) expressed empathic reasoning

These three dimensions were retained as interpretive lenses for organising results, rather than being operationalised as a full score rubric.

2.2 Pedagogical Conditions

Role-play in 2024 was primarily used as a presentation, in which students presented user scenarios with solution propositions in short skits without specific acting guidance. They were encouraged to express user needs, show how the proposed solution addressed those needs, use props or prototypes, and involve all team members. The interviewed user did not have to be represented by the same student in the skit. While examples of design and non-design skits were shown, no specific acting guidance was provided.

In 2025, two Stanislavski-inspired modules were introduced by author 1. The intent was to shift the participants' understanding of role-play from presentation to exploration. The modules stem from user interviews with a focus on imagining the user's lived experience. Before showing the modules, we explained that a user (or any other character performed) **always** has a series of *psychological* needs that motivate their actions. The needs were framed via action-based verbs. The two modules that we implemented after the explanation were as follows:

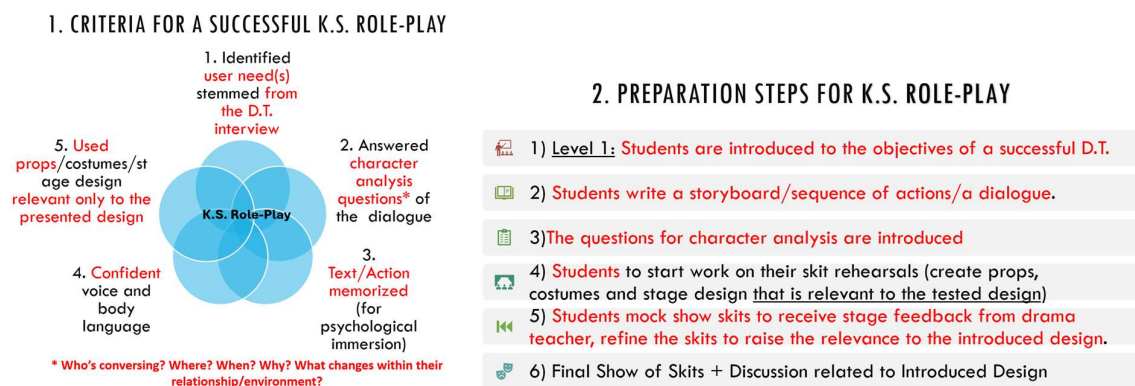


Figure 1. Stanislavski System Inspired Modules Taught by Author 1

2.3 Data Collection

Data was collected primarily via post-course surveys, documentation of final project outputs, and video materials of the workshop process. The surveys included multiple open-ended questions, such as the presented idea content (Q5), points of interest (Q6), roles in the team (Q7), gains from class (Q8), and optional comments (Q12). The time of reflection was automatically measured. Cross-item descriptive coding across Q5-Q8 and Q-12 was used to analyse the responses. Three interpretive lenses were used to analyse the code: user characterisation specificity, product/service specificity, and empathic reasoning. Indicators such as— role-play as presentation vs. exploration; emphasis on DT tools vs. process salience; interview vs. fieldwork salience and self-reflection/value shift language were counted across cohorts.

Percentages reported in the results indicate the proportion of responses in each cohort that contained each coded indicator at least once. Project outputs were categorised by dominant orientation, such as infrastructural or relational/EDI-focused solutions.

Table 1. Coding framework used for qualitative analysis

Lens	Main indicators	Survey items
User characterisation specificity	Constrained-persona framing; interview/fieldwork salience	Q5, Q6
Product/service specificity	DT tool/process salience; product or feature detail	Q6, Q8
Empathic reasoning	Embodied/affective empathy; role-play as understanding; self-reflection/value-shift	Q6, Q8, Q12

2.3.1 Data Screening

A predefined codebook aligned with the RQs was applied consistently across cohorts to reduce interpretive drift. As the study is cohort-based and exploratory, differences between the cases will be interpreted as pedagogical associations rather than causal claims.

3 RESULTS

The 2025 intervention with Stanislavski-inspired facilitation, showed an increase in user-character specificity and embodied empathic reasoning when compared to the 2024 cohort, whereas the 2024 cohort showed stronger focus on DT course tools and process language.

Table 2. Comparison of coded indicators across cohorts

Indicator (code)	2024 (n=22)	2025 (n=18)	Lens / note
Constrained-persona framing in idea statement (Q5)	27.3% (6/22)	88.9% (16/18)	A – User specificity. 2025 much more often embeds a psychologically/conditionally specified user in the problem statement.
Role-play mentioned as part of learning (Q6)	18.2% (4/22)	50.0% (9/18)	Role-play is more salient in 2025 reflections.
Role-play framed as empathic understanding (Q6)	4.5% (~1/22)	22.2% (~4/18)	C – Empathic reasoning. 2025 more often treats role-play as a way to “be in their shoes”.
Embodied/affective empathy language (Q6–Q8)	9.1% (2/22)	44.4% (8/18)	C. Marked increase in references to bodily and emotional understanding in 2025.
Interview/fieldwork named as key element (Q6)	40.9% (9/22)	27.8% (5/18)	A + C. 2024 leans more on interview-driven, cognitive access; 2025 more often claims interviews are insufficient without embodiment.
DT tool/process salience (Q6)	45.5% (10/22)	38.9% (7/18)	B – Process/feature specificity. DT mechanics are foregrounded more consistently in 2024.
Self-reflection/value-shift language (Q6)	13.6% (3/22)	27.8% (5/18)	C + meta-learning. 2025 more often reports shifts in mindset, blind-spot awareness, or ambiguity tolerance.

Cross-item descriptive coding (Q5–Q8, Q12) showed a shift from process-centred reflection in 2024 toward constrained-persona framing and embodied empathic reasoning in 2025 (Table 2).

Constrained-persona framing in design outputs rose from 27.3% (6/22) to 88.9% (16/18) in 2025, with the latter cohort mentioning disability, injury, low-energy thresholds, mental drainage, and recharging needs. This output-level difference suggests substantially higher user framing specificity in 2025.

Second, role-play references increased from 18.2% (4/22) to 50.0% (9/18). Importantly, role-play was more frequently defined as a method for empathic understanding in 2025 (22.2%, 4/18), than in 2024 (4.5%, 1/22). Consistent with this, embodied/affective empathy language rose from 9.1% (2/22) in 2024 to 44.4% (8/18) in 2025, indicating a stronger orientation toward experiential perspective-taking.

In contrast, interview/fieldwork salience (Q6) remained more present in 2024. In 2024, interviews and the “5 Whys” were more frequently emphasised as the main mechanisms of learning, whereas the 2025 cohort responses more often mentioned embodied enactment and user motivation.

Finally, self-reflection/value-shift language increased from 13.6% (3/22) in 2024 to 27.8% (5/18) in 2025. Overall, the findings suggest a cohort-level shift from procedural articulation toward psychologically grounded user understanding and embodied empathic reasoning in 2025.

4 DISCUSSIONS

Findings suggest that Stanislavski-informed role-play can shift participants from skit performances for presentation use to a more exploratory engagement with user psychology. Compared to the cohort of 2024, the participants of 2025 reflected greater focus on constrained user perspective, empathic embodied reasoning, and language reflecting user understanding.

A possible explanation is that the Stanislavski-informed exercises motivated the participants to consider internal objectives and interpersonal situations rather than leaping to solutions. Role-play functioned not only as a device for communication, but also as a method for inquiry. Instead of resolving the problems of the users instantly via design ideas, the participants seemed to invest time in reflecting on ambiguity, misunderstanding and emotional perspectives.

Meanwhile, the 2024 cohort showed stronger understanding of DT course tools and process-related language, suggesting that theatre-inspired facilitation can shift attention from procedural aspects to psychological analysis. Instead of viewing these aspects as opposing, the findings indicate that both can have a synergistic pedagogical value in design education.

Limitations of the study include a small sample size and a comparatively short intervention of only 2 days. Furthermore, there might have been a potential instructor effect, as author 1 is a theatre director, and lastly, a coding interpretation bias is also possible.

Future research should potentially explore how psychological theatre inspired role-play could be integrated in a long-term design education curriculum – whether the effects repeat in different student populations and how can embodied empathy-oriented methods structurally interact with technical design instruction.

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