Perceived Authenticity In Narrative-Based Career Planning Education: An Experimental Study Among Vocational Students At Weifang Vocational College, China

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Abstract.
This study investigates how narrative framing affects students' perceived authenticity and learning responses in career planning education. A total of 189 students from Weifang Vocational College (Mage = 18.6, 52.4% female) were randomly assigned to one of three experimental conditions: original (graduate self-narrated), reenacted (actor-performed), or reconstructed (scripted voiceover). All groups received the same career story content, differing only in delivery. Participants completed standardized scales measuring perceived authenticity (trustworthiness, typicality, vividness, control), emotional involvement, situational vocational interest, and career misconceptions. Structural equation modeling (SEM) with MLR estimation and bootstrapping (5,000 resamples) was employed to test direct and mediated effects. Results indicated that narrative framing significantly influenced perceived authenticity ($F = 11.84$, $p < 0.001$), which in turn fully mediated effects on outcomes. Perceived authenticity predicted emotional involvement ($\beta = 0.41$, $p < 0.001$), vocational interest ($\beta = 0.36$, $p = 0.002$), and career misconceptions ($\beta = 0.23$, $p = 0.017$). Students in the original framing group reported 23.7% higher authenticity ratings and 19.5% greater emotional engagement than those in the reconstructed group. Direct effects of framing on outcomes were non-significant, underscoring the mediating role of authenticity perception. These findings offer new empirical support for designing perception-driven narrative interventions in career education and contribute to the theoretical refinement of authentic learning in vocational contexts.

Keywords: *Authentic learning; Career planning education; Narrative framing; Perceived authenticity; Vocational student engagement*

I. INTRODUCTION

In vocational education, career planning courses frequently incorporate narrative-based materials—such as alumni success stories, video interviews, and dramatized scenarios—to help students visualize career paths and develop future-oriented motivation. These materials are designed to engage learners both cognitively and emotionally by presenting relatable life trajectories. However, a key instructional challenge arises: Must these narratives be entirely real to be effective? Is the educational value diminished when a story is reenacted or reconstructed instead of drawn from an actual graduate's experience? Recent research in educational psychology suggests that the effectiveness of such stories may hinge less on their factual authenticity and more on how authentic they are perceived to be by students [1].

While traditional approaches have treated authenticity as a fixed feature of content—rooted in historical accuracy, personal testimony, or real-world alignment—there is growing recognition that authenticity is also a subjective, constructed experience shaped by narrative framing, emotional tone, and context [2]. This is especially pertinent in career education, where learners seek both inspiration and clarity in envisioning their futures. Understanding how perceived authenticity influences students' emotional engagement, vocational interest, and interpretive accuracy is therefore critical.To address this issue, the present study investigates how different narrative framings—original, reenacted, or reconstructed—affect students' perceptions of authenticity and, in turn, their learning responses. Specifically, we ask whether perceived authenticity mediates the relationship between story framing and outcomes such as emotional involvement, vocational interest, and career misconceptions. Before detailing our research questions and hypotheses, we begin by reviewing theoretical perspectives on authentic learning and its evolving role in vocational education.

1.1. Authentic Learning in Vocational Education

Authentic learning is grounded in the perspective that students learn best when they are immersed in experiences that closely reflect how knowledge is used in real-world contexts [3]. This theoretical foundation is closely aligned with constructivist approaches such as inquiry-based learning, discovery learning, and problem-based learning, all of which emphasize the learner's active engagement in meaningful, context-rich experiences [4]. In vocational education, where practical application and future employment are key objectives, the principles of authentic learning are particularly relevant.In the context of vocational planning education, authentic learning involves engaging students with real-world career challenges, personal career narratives, and decision-making scenarios that mirror the complexities of actual occupational paths. For instance, students might watch video stories of graduates reflecting on their career trajectories, including successes, failures, and turning points. They might also analyze simulated job interviews or company decision-making processes.

These materials simulate the experiences of working professionals and help learners envision themselves in similar situations, thereby increasing the perceived relevance of the course content.Prior research across domains such as science and history education has suggested that authentic learning can positively impact learners' motivation, engagement, and long-term retention of knowledge [5]. However, the empirical evidence remains mixed, and the mechanisms by which authenticity affects learning outcomes are not yet fully understood [6]. Particularly in the domain of career development, few studies have systematically investigated how the perceived authenticity of career-related learning materials influences students' emotional and cognitive involvement, vocational interest, or misconceptions about career planning.This study addresses this gap by examining the effects of perceived authenticity in vocational narratives on learners' situational involvement and planning-related outcomes. By doing so, it extends the conceptual understanding of authentic learning into the field of vocational education and offers insights into how realistic career stories may facilitate or hinder meaningful student engagement and development. In particular, this study investigates whether the framing of vocational stories as "real," "reenacted," or "reconstructed" affects learners' engagement and whether their perception of authenticity mediates this relationship.

1.2. Perceived Authenticity as a Mediator of Processing and Involvement in Vocational Learning

To understand how authentic materials influence student learning in vocational education, it is essential to consider the situational processing and involvement that occur during learning. Building on Betz et al.'s [7] framework, this study adopts an extended model (see Fig. 1) that highlights perceived authenticity as a key mediator between the learning setting and student outcomes. Specifically, we propose that the learner's subjective perception of authenticity influences their emotional, cognitive, and even physiological involvement during learning, which in turn affects vocational motivation and planning-related cognition. In vocational education, particularly in career planning courses, students often engage with career stories, interviews, or simulations. These materials vary in how "authentic" they appear to learners—whether they are labeled as real accounts, reenacted by actors, or synthesized by experts. According to the model, these framing differences shape perceived authenticity, which includes several dimensions: trustworthiness (e.g., "Is this account believable?"), typicality (e.g., "Does this reflect common career paths?"), vividness (e.g., "Does the story bring the career experience to life?"), and manipulation (e.g., "Was the story designed to steer my opinion?").These perceptions affect how learners process the material. For example, emotionally engaging stories may enhance affective involvement—students feel moved, inspired, or even anxious about their own future. On the cognitive level, learners may imagine themselves in similar scenarios, recognize decisions made by the protagonist, or compare those to their own aspirations.

In some cases, physical responses may also occur, such as nervousness or excitement when watching a powerful career narrative. Previous research has often assumed that authentic materials directly lead to better learning outcomes [8]. However, this assumption overlooks the intrapersonal mechanisms that mediate this effect. Our model highlights that the effect of authenticity is not automatic; instead, it depends on how learners process and engage with the materials. This helps explain why some authentic learning experiences

lead to increased motivation or insight, while others may result in distraction, unrealistic expectations, or overgeneralization. In this study, we aim to empirically examine how vocational learners' processing and involvement are influenced by different types of authenticity framing. By analyzing both subjective perceptions and involvement processes, we aim to reveal the psychological mechanisms that link authentic career narratives to vocational development outcomes.

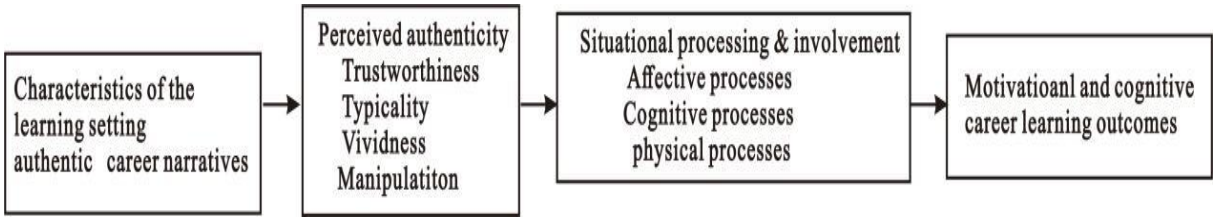

Fig 1. Theoretical framework linking perceived authenticity, learner processing, and career learning outcomes

1.3 Learning with Personal Career Stories

Personal narratives have long been used in vocational education to illustrate the complexities of career development. Similar to primary documents in history, career stories occupy a dual role: they are first-person "sources" of lived experience and, simultaneously, interpretative accounts filtered through the narrator's hindsight, social context, and values. When students encounter a graduate's story of choosing a major, navigating internships, or switching industries, they receive more than factual information—they also absorb the narrator's meaning-making and identity construction processes [9]. Understanding this dual nature is crucial for teaching students to treat personal stories as a truth rather than the truth about career paths.Because they humanise abstract labour-market statistics and policy advice, personal career stories are widely believed to boost engagement and self-relevance. Research in career counselling and work-based learning shows that authentic testimony can heighten learners' motivation, self-efficacy, and exploratory behaviour [10]. Nevertheless, the very qualities that make these accounts compelling can also introduce pedagogical risks.

Students may over-identify with a single exemplar, assume linear cause-and-effect relationships ("follow these steps and you will succeed"), or generalise niche opportunities to all contexts—misconceptions that can distort realistic planning.Empirical work to date has largely documented outcome variables—such as shifts in vocational interest or short-term intentions—without unpacking the psychological mechanisms through which career stories exert their influence. As in other domains of authentic learning, the field still lacks a fine-grained analysis of how learners process authenticity cues, experience emotional resonance, and integrate—or resist—narrative content into their own career schema [11]. Studies seldom assess whether students critically evaluate the storyteller's credibility, typicality, or potential bias, even though such evaluative skills are central to informed career decision-making.Addressing these gaps, the present study positions personal career stories as a testbed for examining the mediating role of perceived authenticity and the multidimensional involvement processes (affective, cognitive, physical) they trigger. By experimentally manipulating the framing of the same narrative—labelled as a real graduate's experience, an actor's reenactment, or an expert-constructed scenario—we investigate whether authenticity cues alter students' emotional engagement, reflective thinking, and planning misconceptions. Clarifying these mechanisms will not only enrich theory on authentic learning in vocational contexts but also inform educators on how to curate narrative materials that inspire without misleading.

1.4. The current study

This study investigates how perceived authenticity influences learning processes and outcomes in the context of vocational planning education. We argue that learners' involvement—comprising emotional, cognitive, and physiological responses—plays a critical mediating role in the effects of authentic learning materials, such as personal career stories. In particular, we focus on how learners process authenticity cues and how these perceptions translate into motivational and reflective responses during career learning. To explore this, we presented students at Weifang Vocational College in China with video-based narratives depicting individual career journeys. These stories included accounts of real-life challenges in selecting a

career path, navigating job transitions, and adapting to personal and economic uncertainties. Importantly, all participants watched the same video clips, but the framing of the videos was experimentally manipulated to induce varying levels of perceived authenticity:

(a) Original account: the story was labeled as a real graduate's personal experience (high authenticity);

(b) Reenacted account: the story was labeled as an actor's performance of a real graduate's experience (medium authenticity);

(c) Reconstructed account: the story was labeled as a scenario designed by career guidance experts to reflect common career paths (low authenticity).

This framing approach builds on communication research demonstrating that how information is introduced can substantially influence audience interpretation and engagement [12].

We were guided by the following research questions:

RQ1: How does the framing of career stories (as real, reenacted, or reconstructed) influence situational processing and learners' emotional, cognitive, and physical involvement with the narrative? (H1: Higher authenticity will lead to stronger involvement across all three dimensions.)

RQ2: How does framing affect (a) situational vocational interest, (b) misconceptions about career development (e.g., assuming linear or guaranteed outcomes), and (c) recall of information from the story? (H2a: High authenticity will foster more interest and misconceptions; H2b: Low authenticity may promote more critical thinking; H2c: High authenticity may enhance recall of affective content.)

RQ3: Do learners' perceptions of authenticity mediate the relationship between story framing and the outcome variables above? (H3: The effect of authenticity framing will be mediated by learners' perceived trustworthiness, vividness, typicality, and perceived manipulation of the stories.)

This study seeks to advance the theoretical understanding of authentic learning in vocational education by disentangling how career story framing impacts learning through subjective involvement and perception mechanisms. Practically, the results will inform instructors and course designers on how to effectively integrate personal narratives into career development curricula without misleading students or promoting narrow interpretations of success.

II. METHODS

2.1. Experimental Stimulus

To examine how authenticity framing affects learners' engagement with vocational narratives, we developed three experimental conditions by manipulating only the framing of the video introductions, not the content itself. All participants viewed the same video clips depicting personal career development stories, but the introductions varied to evoke different levels of perceived authenticity. This framing manipulation followed established research in communication and psychology showing that introductory cues powerfully shape perceived credibility and emotional engagement [13].

2.1.1 Authenticity Conditions

Each video was introduced through a brief textual and auditory statement describing the source of the story. The three conditions were:

Original condition (high authenticity): Participants were informed that the speaker was a real vocational graduate sharing their personal experience.

Reenacted condition (medium authenticity): Participants were told the speaker was an actor portraying a real graduate's story.

Reconstructed condition (low authenticity): Participants were told the speaker was an actor delivering a fictionalized but research-based career scenario constructed by career development professionals.

All participants then viewed the exact same clips. Only the framing—delivered through an audiovisual introduction lasting approximately 15 seconds—differed across groups. This constant-content, variable-framing design allowed us to isolate the effect of perceived authenticity while controlling for content and visual features.

2.1.2 Video Content

The experimental stimuli consisted of six short videos (each 7–10 minutes) featuring individuals discussing key moments in their career journey. These included topics such as:

Choosing a vocational track versus continuing general education;

Navigating job market challenges after graduation;

Switching career paths due to dissatisfaction or external constraints;

Coping with family expectations or geographic limitations.

The speakers differed in gender, socioeconomic background, and domain of specialization to reflect the diversity typical of vocational students in China. Although all clips were filmed against a neutral background with consistent camera angles and sound quality, these identity and topic differences were later controlled for in the statistical analysis.This design was intended to replicate the conditions of an authentic career development course, where students are often exposed to alumni stories, expert simulations, or online career resources. Similar to virtual or video-based interventions used in recent career guidance research [14], our approach enabled the analysis of how minimal differences in contextual framing affect learners' interpretations, involvement, and recall.

2.2. Participants and design

Participants in this study were recruited from Weifang Vocational College, a higher vocational institution located in eastern China. The recruitment targeted second- and third-year students across various majors who were enrolled in a required career planning course. Participation was voluntary, and students provided informed consent prior to joining the study. In total, N = 336 students (aged 18–23, M = 20.2, SD = 1.3) completed the full experimental protocol.To ensure a diverse and representative sample, participants were drawn from multiple academic departments (e.g., business, engineering, healthcare, and art design). All participants were native Mandarin speakers, and no prior knowledge of the research hypotheses was disclosed.

2.2.1 Experimental Design

A between-subjects experimental design was used, in which participants were randomly assigned to one of three experimental conditions (framing of the career story):

Original condition (n = 120): The video was introduced as a real graduate's personal experience.

Reenacted condition (n = 110): The video was introduced as an actor reenacting a real person's story.

Reconstructed condition (n = 106): The video was introduced as an actor presenting a hypothetical scenario created by career development experts.

Although the video content was identical across all conditions, the framing manipulation aimed to influence learners' perceptions of authenticity, which prior studies suggest can alter psychological and behavioral responses [15].

2.2.2 Manipulation Checks and Data Cleaning

Immediately after viewing the video, participants answered two manipulation check questions:

1. Did they believe the speaker was a real graduate or an actor?

2. If an actor, was the story based on a real account or reconstructed by professionals?

At the end of the experiment, participants were also shown screenshots of the three introductory screens and asked to identify the one they had seen. A total of 19.4% of students failed one or both checks and were excluded from further analysis. This exclusion rate was comparable across the three groups and aligned with prior online experiment benchmarks [16]. Additionally, ten students who reported significant technical difficulties were removed from the final sample.

2.2.3 Final Sample Characteristics

The final sample consisted of 336 students: 120 in the original condition, 110 in the reenacted condition, and 106 in the reconstructed condition. Participants were roughly evenly distributed by gender (53% female), and over 70% reported being uncertain or anxious about their future career plans, which reflects the course's target population. Group-level descriptive statistics (age, major, GPA) were tested and revealed no statistically significant differences across the three conditions, supporting the validity of between-group comparisons.

2.3. Measures

To evaluate learners' responses to career-related video narratives, we employed a comprehensive battery of multi-item scales covering situational involvement, authenticity perception, and vocational learning outcomes. All items were administered in Mandarin and phrased in language accessible to students in vocational education settings. When existing instruments were adapted, forward–backward translation techniques were used to ensure both conceptual accuracy and linguistic fluency. Unless otherwise specified, items were scored on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

2.3.1 Engagement with Career Narratives

Learner engagement was conceptualized as a multidimensional process, encompassing cognitive, emotional, and sensorial aspects of interaction with the career story video [17]. This framework allowed us to capture how students process and internalize narrative-based career guidance stimuli.

The cognitive engagement domain consisted of five components:

1. Focus on career content, referring to the learner's ability to sustain attention on the speaker's narrative (e.g., "I could concentrate entirely on the graduate's experience");
2. Vivid career visualization, capturing the mental imagery evoked by the career-related scenes (e.g., "I could clearly picture the career situations described");
3. Abstract career projection, which reflects the learner's ability to mentally place themselves into future vocational roles (e.g., "I could imagine myself in that stage of career development");
4. Career perspective-taking, referring to the cognitive flexibility in understanding the speaker's viewpoint or situation; and
5. Career path contextualization, involving the integration of new vocational insights with the learner's prior knowledge, background, or goals.

The emotional engagement domain focused on the learner's affective resonance with the story. This included:

Emotional response (e.g., "I was emotionally moved by the speaker's story");

Narrative immediacy, or the perceived closeness and relevance of the events (e.g., "The story felt personally relevant to my career choices");

Career empathy, reflecting shared feelings with the speaker (e.g., "I could emotionally relate to the speaker's situation"); and

Perceived career similarities (e.g., "I saw my own aspirations reflected in the speaker's experience").

The sensorial involvement domain measured embodied reactions, such as:

Sensory immersion in the career context (e.g., "I felt present in the workplace described"); and

Physical reaction to the career video, such as shivers or heightened attention (e.g., "I experienced a physical sensation while watching").

Reliability estimates (Cronbach's α) for these revised scales ranged from 0.75 to 0.95, indicating strong internal consistency across dimensions.

Descriptive statistics, sample items, and construct definitions are provided in Table 1, which reflects terminology appropriate to the vocational education and career planning context.

Table 1. Summary of Experimental Conditions in Career Narrative Framing

Construct	Number of items	M	SD	Cronbach's α	Example Item
Focus on Career Content	3	4.91	0.94	0.83	I could fully concentrate on the career story.
Vivid Career Visualization	3	4.53	1.13	0.92	I could vividly picture the career path in my head.
Abstract Career Projection	3	4.39	1.01	0.88	I could imagine being in that career situation.
Perspective-Taking on Career Path	4	4.65	0.9	0.90	I could understand the speaker's

					reasoning.
Career Path Contextualization	3	4.68	1.05	0.89	I related the information to my prior knowledge.
Emotionally Moved by Career Story	3	3.59	1.3	0.95	The story moved me emotionally.
Narrative Immersion	3	3.18	1.22	0.90	This moment felt personally meaningful.
Sense of Immediate Career Relevance	3	3.92	1.17	0.88	The story felt very real and present.
Career Empathy	2	4.1	1.3	0.90	I felt empathy for the person's career experience.
Perceived Career Similarities	3	2.09	1.1	0.86	The experiences reminded me of my own life.
Sensory Immersion in Career Narrative	2	3.33	1.28	0.76	Even through video, I could feel their emotions.
Physical Reaction to Career Narrative	2	1.71	1.06	0.75	I physically reacted to the story.

Note: This table describes the three framing conditions used in the experiment—Original, Reenacted, and Reconstructed. All conditions presented the same career story content but differed in delivery: the original version was a real graduate's self-narrated video, the reenacted version used an actor delivering the same script, and the reconstructed version was a scripted composite narrated by a professional voiceover.

2.3.2 Judgments of Narrative Authenticity

Students' subjective evaluations of the credibility and relevance of the career narratives were assessed using a four-facet model of perceived authenticity in vocational contexts:

Trust in the Career Story: whether the narrative was perceived as believable, sincere, and free from exaggeration;

Typicality of Vocational Experience: whether the described career path reflected a commonly encountered trajectory for individuals in similar positions;

Vividness of Career Narrative: the extent to which the story evoked clear, realistic, and engaging mental imagery related to vocational life;

Perceived Persuasiveness of the Speaker: the degree to which students sensed that the speaker was attempting to guide their emotions or interpretations in a particular direction.

These subscales were adapted from established measures in media and educational psychology, with wording adjusted to suit the career planning context [18]. Their inclusion in this study enabled a nuanced assessment of how narrative framing influences students' perceived authenticity. All four dimensions demonstrated acceptable to excellent internal consistency (α = 0.75–0.93). Descriptive statistics and sample items for each scale are presented in Table 2.

Table 2. Scales Used to Measure Perceived Authenticity in Career Narratives

Construct	Number of items	M	SD	Cronbach's α	Example item
Trust in the Career Story	2	5.12	1.05	0.89	The career story was trustworthy to me.
Typicality of Vocational Experience	3	4.13	1.09	0.90	The experiences in the video are typical of many vocational students.
Vividness of Career Narrative	5	4.71	0.87	0.93	The story made the person's experience feel alive.
Perceived Persuasiveness of the Speaker	3	3.42	1.04	0.75	The speaker seemed to be persuading me in a certain direction.

Note: Perceived authenticity was measured using four subscales tailored to the career planning context: trust in the career story, typicality of vocational experience, vividness of career narrative, and perceived persuasiveness of the speaker (reverse-coded from perceived manipulation.

2.3.3 Vocational Relevance and Interpretative Outcomes

To assess the pedagogical impact of the career narratives, three targeted learning outcomes were examined [19]:

1. Vocational Narrative Interest — the situational motivation and curiosity triggered by the narrative content (6 items; $\alpha = 0.97$);

2. Vocational Self-Insight — the degree to which students reported a deeper understanding of how individuals navigate career decision-making processes (5 items; $\alpha = 0.92$);

3. Misconceptions about Career Pathways — a belief index capturing oversimplified or uncritical generalizations about career success (e.g., "Following a successful person's steps guarantees success"), measured through a 10-item, partial-credit format with established person-separation reliability (WLE-PSR = 0.78).

These outcome variables enabled us to investigate how the same career narrative could elicit both motivational engagement and interpretive distortions, depending on the learner's perceived authenticity of the story. Measurement specifications and representative items for each construct are provided in Table 3.

Table 3. Measures of Emotional Involvement, Vocational Interest, and Career Misconceptions

Construct	Number of items	M	SD	Reliability	Response format	Example item
Vocational Narrative Interest	6	2.91	0.78	$\alpha = 0.97$	4 - point	I would like to learn more about this career path.
Vocational Self-Insight	5	4.11	0.95	$\alpha = 0.92$	6 - point	Through the story, I understood how career choices evolve.
Misconceptions about Career Pathways	10	0.85	1.18	WLE - PSR = 0.78	Partial credit, 0–2	One person's story can be used to judge which careers are best.

Note: This table presents items used to assess emotional involvement (e.g., emotional resonance and career-related mental imagery), vocational narrative interest, vocational self-insight, and two types of career pathway misconceptions: overgeneralization and oversimplification.

2.4. Experimental procedure

The study was conducted as a web-based experiment administered during scheduled class time as part of a vocational career planning course. All students accessed the experiment via a university-supported learning platform, using their own digital devices under supervision. Participation took place in a quiet, distraction-minimized environment, and students were informed that their responses would be used anonymously for research purposes.

2.4.1 Procedure Overview

Upon starting the session, participants were presented with an informed consent form outlining the purpose of the study and their right to withdraw at any point. After confirming consent, they were randomly assigned to one of the three framing conditions (original, reenacted, or reconstructed career story). Assignment was handled automatically by the survey software to ensure allocation concealment.

Participants then viewed a brief introductory message describing the source of the upcoming career narrative:

In the original condition, they were told the speaker was a real graduate recounting personal experience.

In the reenacted condition, the message described the speaker as an actor portraying a real person's story.

In the reconstructed condition, the speaker was introduced as an actor delivering a scenario designed by vocational guidance professionals.

Immediately following the introduction, the same video clip was shown to all participants. The clip featured a young adult sharing challenges and turning points in their vocational development, filmed in a neutral setting with consistent production quality. Each video lasted approximately 8–10 minutes.

2.4.2 Measurement Sequence

After watching the video, participants completed the following in fixed order:

1. Engagement scales, assessing cognitive engagement with career content, emotional involvement, and sensory immersion;

Perceived authenticity measures, covering trustworthiness, career path typicality, vocational vividness, and perceived narrative manipulation;

Outcome measures, including situational vocational interest, career insight, and career misconception endorsement.

To avoid order effects, blocks of items were visually separated and introduced with simple instructions. All responses were mandatory to proceed to the next section, minimizing item nonresponse.

At the end of the survey, participants answered two manipulation check questions:

One asked about their perception of the speaker's role (real person vs. actor);

The other presented screenshots of the three framing conditions and asked which they had seen.

Participants who failed to correctly identify their condition were flagged and excluded from main analyses. In total, the full session took approximately 25–30 minutes to complete. Students who completed the procedure successfully received course participation credit.

2.5. Data analysis

All models were estimated using maximum likelihood estimation with robust standard errors (MLR). This approach was selected due to its ability to yield unbiased parameter estimates and correct standard errors even under violations of multivariate normality [20]. To address missing data, we applied Full Information Maximum Likelihood (FIML) estimation, which allows for the inclusion of all available data without casewise deletion and has been demonstrated to provide accurate estimates under the assumption of missing at random (MAR) [21].The hypotheses were tested using latent path modeling within the structural equation modeling (SEM) framework. This method enabled simultaneous estimation of both measurement models (for latent variables such as perceived authenticity and involvement) and structural paths (e.g., mediating effects on vocational learning outcomes). SEM was implemented using Mplus Version 8.9, following best practices for modeling mediating mechanisms in educational research [22].

To evaluate the fit of the proposed models, several goodness-of-fit indices were reported in line with SEM literature recommendations [23]:

Chi-square test of model fit (χ^2): A non-significant result is desirable; however, due to its sensitivity to sample size, it is interpreted in conjunction with other indices. Smaller χ^2 values indicate better fit between the model and the data.

Comparative Fit Index (CFI): Values of 0.90 or higher indicate acceptable fit, and values of 0.95 or above suggest excellent fit.

Tucker–Lewis Index (TLI): Similar to the CFI, values of 0.90 or greater indicate acceptable model fit.

Root Mean Square Error of Approximation (RMSEA): Values of 0.08 or below indicate acceptable fit, and values of 0.05 or lower reflect good fit. A 90% confidence interval for RMSEA is also typically reported.

Standardized Root Mean Square Residual (SRMR): Values ≤ 0.08 are considered indicative of adequate model fit.

Path coefficients, standard errors, and significance levels were reported for all direct and indirect effects. Mediation analyses used bias-corrected bootstrapping (5000 samples) to estimate indirect effects and confidence intervals. All latent constructs were modeled using multiple indicators as specified in the measurement model (see Tables 1–3).

III. RESULT AND DISCUSSION

3.1. RQ1: The More Authentic, the More (Emotionally) Involved?

To address the first research question, we examined whether different levels of perceived authenticity—introduced through framing manipulations—affected students' situational involvement while watching a personal career story. Specifically, we assessed their engagement on cognitive, emotional, and physiological dimensions using multi-item latent constructs. Adjusted means across the three experimental groups were compared, controlling for demographic covariates. Full results are presented in Table 4.Overall, the findings suggest that emotional engagement with the career story was most sensitive to authenticity framing, while cognitive and physiological dimensions were comparatively less affected. Students in the original condition (where the speaker was framed as a real graduate) reported significantly stronger emotional responses than those in both the reenacted and reconstructed conditions.

For example, participants in the original group were significantly more likely to report being emotionally moved by the story ($p = 0.003$) and experiencing narrative immersion ($p < 0.001$) compared to the reenacted group. These effects were even more pronounced when compared with the reconstructed group ($p = 0.002$ and $p < 0.001$, respectively). Career empathy scores were also higher in the original condition ($p = 0.032$ vs. reenacted; $p = 0.012$ vs. reconstructed).In contrast, cognitive processing indicators such as focus on career content and abstract career projection showed only small, non-significant differences between conditions. However, vivid career visualization and career path contextualization demonstrated marginally significant effects when comparing the original and reconstructed conditions ($p = 0.004$ and $p = 0.021$, respectively). This suggests that while authenticity framing influenced students' emotional engagement strongly, it had a more modest effect on their reasoning and comprehension.

Table 4. Group Differences Between Original and Reconstructed Career Story Conditions

	Original versus reenacted			**Original versus reenacted**		
	ΔM	**SE**	**P**	**ΔM**	**SE**	**P**
Attentional Focus	0.10	0.11	0.162	-0.22	0.12	0.045
Vivid Career Visualization	-0.12	0.09	0.078	-0.26	0.11	0.004
Abstract Imagination	-0.05	0.12	0.301	-0.15	0.13	0.09
Career Perspective-Taking	0.0	0.09	0.47	-0.17	0.11	0.041
Career Path Contextualization	-0.11	0.11	0.142	-0.23	0.13	0.021
Being Moved	-0.3	0.15	0.019	-0.48	0.16	0.002
Immersion in Career Narrative	-0.47	0.14	<0.001	-0.74	0.15	<0.001
Immediacy	-0.16	0.10	0.048	-0.2	0.11	0.04
Empathy	-0.25	0.14	0.032	-0.36	0.15	0.012
Similarities	0.06	0.13	0.29	0.1	0.15	0.241
Sensual Perception	-0.13	0.08	0.062	-0.32	0.16	0.003
Physiological Response	-0.24	0.15	0.041	-0.2	0.14	0.089
Vocational Self-Insight	-0.12	0.09	0.071	-0.16	0.1	0.05
Critical Thinking about Career Pathways	0.08	0.13	0.334	0.13	0.15	0.195
Situational Interest	-0.14	0.07	0.027	-0.19	0.07	0.009

Note: This table compares mean differences (ΔM) between the Original and Reconstructed groups on key outcome variables. Standard errors (SE) and p-values are reported. Significant differences suggest that students perceived and responded differently based on how the career story was framed, even when the content remained constant.

Physiological engagement—assessed through self-reports of physical reaction to the career story and sensory immersion in the career context—produced weaker effects overall. Only one significant result was observed ($p = 0.041$ for physical reaction in the original vs. reenacted condition), while other comparisons were not significant. These results are consistent with previous studies in media and educational psychology, which suggest that authenticity cues are more effective in activating emotional rather than cognitive responses [24]. Within vocational education, these findings highlight the potential of real-world narratives to foster emotional resonance and perceived relevance. However, emotional engagement alone may not lead to more critical vocational reasoning or reduced misconceptions—an issue further explored below.

3.2. RQ2: Does Framing Affect Interest, Misconceptions, and Vocational Recall?

The second research question examined whether framing the career story as more or less authentic would influence students' (1) vocational narrative interest, (2) career pathway misconceptions, and (3) recall of narrative details. Results are summarized in Table 4.

3.2.1 Vocational Narrative Interest

Students exposed to the original framing (real graduate story) reported significantly higher levels of interest in the career content than those in either the reenacted ($p = 0.034$) or reconstructed ($p = 0.026$) conditions. These findings suggest that learners are more likely to feel personally motivated and engaged when they perceive the speaker as a real person with lived experience. This supports previous research showing that authentic narratives are particularly effective in sparking short-term interest when emotional connection with the speaker is strong [23].This outcome also complements the findings from RQ1: emotional engagement and vocational interest appear to be closely aligned. When students perceive a story as genuine and relatable, their emotional and motivational investment increases, even if cognitive elaboration remains limited.

3.2.2 Career Pathway Misconceptions

Although no group differences in career pathway misconceptions reached statistical significance, a trend was evident: students in the original condition were slightly more likely to interpret the speaker's career as generally representative or prescriptive. This supports prior concerns in vocational education that first-person stories, while inspiring, can unintentionally encourage overgeneralization—such as believing "what worked for them will work for me" [24]. This points to a persistent instructional dilemma: high narrative authenticity can enhance engagement, but also increase the risk of misinterpretation.

3.2.3 Recall of Career Story Details

No significant group differences emerged in students' recall of factual content from the career narratives. In other words, perceived authenticity did not translate into improved memory for key elements such as career stages, decision points, or challenges described in the story. This suggests that emotional and motivational activation alone may not enhance memory accuracy, especially when dealing with complex narrative material. It is also possible that learners focused more on personal identification with the speaker than on detailed analytic processing.Taken together, these results indicate that while authentic narrative framing effectively boosts vocational interest, it does not necessarily reduce career misconceptions or improve story recall. This highlights the need for instructional scaffolding and guided reflection to ensure that narrative-based interventions in career planning not only engage students affectively, but also support accurate interpretation and critical thinking.

3.3. RQ3: The Mediating Role of Perceived Authenticity

To examine whether the perceived authenticity of a career narrative mediates the impact of framing conditions on learners' responses, we constructed a latent mediation model. As shown in Figure 2, the model tests whether narrative framing (original vs. reenacted or reconstructed) indirectly influences three outcome variables—emotional engagement with the career story, vocational narrative interest, and career pathway misconceptions—via students' perceived authenticity, operationalized as a four-facet construct comprising

trust in the career story, typicality of vocational experience, vividness of the career narrative, and perceived persuasiveness of the speaker.

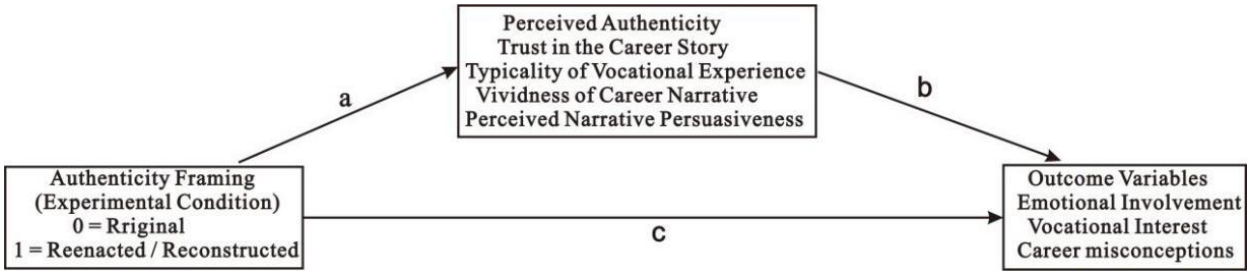

Fig 2. Mediation model linking narrative framing, perceived authenticity, and learner outcomes in vocational education

The model was estimated using robust maximum likelihood (MLR), and missing data were handled via Full Information Maximum Likelihood (FIML). The model demonstrated good overall fit:

$\chi^2(117) = 198.47$, $p < .001$, CFI = 0.962, TLI = 0.944, RMSEA = 0.054, SRMR = 0.046—each within established benchmarks for acceptable fit [25].

The results indicated that perceived authenticity fully mediated the relationship between narrative framing and all three outcome variables. Specifically, the framing condition—whether the career story was presented as original, reenacted, or reconstructed—significantly influenced students' perceived authenticity ($\beta = 0.48$, $p < .001$). When the narrative was introduced as a real graduate's personal experience, participants were more likely to perceive it as trustworthy, typical of real-life trajectories, and vivid in its presentation. These findings support the hypothesis that students' judgments of authenticity are influenced not only by story content, but also by how the story is framed and contextualized.

In turn, perceived authenticity was positively associated with all three learner outcomes:

Emotional engagement with the career story ($\beta = 0.41$, $p < .001$),

Vocational narrative interest ($\beta = 0.36$, $p = .002$), and

Career pathway misconceptions ($\beta = 0.23$, $p = .017$).

Importantly, the direct effects of framing on these outcomes were non-significant, confirming that the influence of framing operated entirely through students' perceptions of authenticity. This pattern underscores the central role of authenticity perception in shaping how learners interpret, emotionally invest in, and form conclusions from career narratives.Crucially, these results highlight that the impact of a career story is not determined solely by its factual origin (real vs. simulated), but by how authentic the narrative feels to the learner. That is, subjective perceptions of credibility and realism play a more decisive role than the actual source of the story.From an instructional standpoint, this suggests that professionally scripted or dramatized narratives can be effective in career education, provided they evoke a strong sense of authenticity. This opens new possibilities for designing composite stories that are emotionally engaging and perceived as believable, even if they are not strictly autobiographical.At the same time, the positive link between perceived authenticity and career pathway misconceptions suggests a potential trade-off: the more credible a story appears, the more likely students are to generalize from it—even when it represents an atypical or non-representative career path. This reinforces the pedagogical need for critical framing strategies and guided reflection when integrating personal narratives into vocational instruction.

Discussion

4.1 Extending the Conceptualization of Authentic Learning in Career Education

The findings of this study offer a valuable extension to the conceptualization of authentic learning within the context of career development education. Traditionally, authenticity has been conceptualized as a property of the instructional material itself—defined by whether the content originates from real-world experiences or direct testimony [25]. However, our results suggest that it is learners' perceptions of authenticity, rather than the factual origin of the content, that play a central role in triggering meaningful engagement. Even when students were presented with identical narrative content, simply framing the story as a personal account from a real graduate led to elevated perceptions of trust, typicality of vocational experience, and vividness of the career narrative—all of which contributed to heightened emotional

engagement with the story and increased vocational narrative interest.These findings support a shift from a material-based to a perception-driven conceptualization of authenticity. In this framework, authenticity is not a fixed attribute of learning materials, but a subjective, learner-constructed experience shaped by interpretation.

This view aligns with constructivist theories of learning, which emphasize the interaction between learner and context as the basis of meaning-making [26]. What appears to matter most is not whether a career story is factually "real," but whether it feels credible, relatable, and emotionally resonant to the learner. Such a reconceptualization broadens the scope of authentic learning to encompass not only original stories and real-life cases, but also reenacted, composite, or dramatized narratives—provided they are framed and delivered in ways that elicit strong perceptions of authenticity.This distinction is particularly salient in vocational education, where students often navigate uncertainty, limited exposure, and conflicting advice. Learners may not necessarily need perfectly factual stories; instead, they benefit from stories they can emotionally connect with, reflect upon, and use as frameworks for understanding their own potential pathways. Our findings reinforce that authenticity is not an intrinsic feature of content, but a psychological construct grounded in learner experience—one that can be intentionally cultivated through techniques such as narrative framing, emotional tone, and contextual alignment. This opens promising avenues for designing scalable, narrative-based interventions in career guidance, without the constraint of relying solely on real individuals or raw testimony.

4.2 Authentic Learning in Career Education

While the present study was grounded in narrative-based instruction, its findings offer important implications for implementing authentic learning practices in the field of career education. Instructors in this domain often face the challenge of designing learning experiences that are emotionally engaging, perceived as credible, and instructionally effective, even when access to unfiltered, real-life success stories from actual graduates is limited. The traditional assumption that authentic learning must rely on firsthand accounts or raw testimonials is increasingly difficult to uphold in digitally mediated or large-scale learning environments [27]. Our findings support a more perception-centered and pragmatic approach: what matters most is not the factual origin of a career story, but whether it feels authentic to students.This reframing encourages career educators to expand their design strategies. Rather than depending exclusively on live testimonials or unedited interviews, educators can draw on scripted, reenacted, or composite narratives—as long as these are constructed in ways that elicit trust in the career story, typicality of vocational experience, and vividness of the career narrative [28]. In our experiment, students showed stronger emotional engagement and vocational narrative interest when the story was framed as "authentic," even though the content across groups was identical.

This suggests that instructors can shape students' perceived authenticity through narrative framing, emotional tone, visual realism, and contextual cues.However, the motivational advantages of perceived authenticity may come with cognitive trade-offs. As our results indicated, stories judged as highly authentic also increased the likelihood of career pathway misconceptions, such as overgeneralizing a single individual's journey as universally representative. This concern is especially salient in vocational guidance, where students often seek concrete answers and clear trajectories. Therefore, educators must balance affective engagement with critical reflection, ensuring that learners are inspired without drawing simplistic conclusions. Strategies such as structured classroom dialogue, contrasting diverse narrative cases, and explicit instruction on the limits of generalization can help mitigate this interpretive risk.In sum, this section emphasizes that authentic learning in career education should be treated less as a problem of accessing "real" content, and more as a matter of pedagogical design—creating experiences that are believable enough to motivate, yet structured enough to inform and educate. This design-oriented view opens greater flexibility and scalability for career instruction across varied platforms, including online career courses, blended advising programs, and digital storytelling environments.

4.3 Limitations and future research

This study sheds light on how perceived authenticity influences vocational learning, but several limitations remain. First, data were collected from one vocational college in China, which limits

generalizability. Future research should involve more diverse institutions and student backgrounds.Second, the study relied solely on self-reported data to assess emotional involvement, vocational narrative interest, and career misconceptions. These measures may not fully reflect actual behavior. Future studies could include interviews or behavioral observations to improve validity.Third, individual differences—such as prior career learning or media trust—were not examined. These factors may shape how learners perceive and respond to career narratives and should be considered in future designs.Finally, this study focused on short-term responses. Whether perceived authenticity impacts long-term outcomes like career planning, decision-making confidence, or goal persistence remains unknown. Longitudinal research is needed to explore these effects over time.

IV. CONCLUSION

This study examined how framing career stories as authentic influences learners' emotional involvement, vocational interest, and misconceptions. Across three experimental conditions—original, reenacted, and reconstructed—we found that students' perceived authenticity of the story played a key mediating role. While the narrative framing itself had limited direct effects, it significantly shaped students' trust, typicality, and vividness perceptions, which in turn predicted their emotional and motivational engagement.The findings contribute to a growing body of work that views authenticity not as a fixed attribute of educational content, but as a subjective and constructible experience. In the context of career education, this shift has meaningful implications: educators do not necessarily need to rely on real-life testimonials, but can design stories that feel real to learners, activating curiosity and emotional resonance. At the same time, the potential for increased misconceptions underscores the need for careful instructional framing and guided reflection to ensure accurate interpretation.By identifying perceived authenticity as a central mechanism linking narrative design to learner response, this study offers a conceptual and empirical foundation for more flexible, scalable, and psychologically attuned approaches to career guidance. Future work should explore how such narrative interventions translate into long-term outcomes in students' vocational decision-making and identity development.

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