Research Article

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Leveraging AI-Generated Visuals for Enhancing Management of Career Orientation: A Quasi-Experimental Study

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Abstract: This research explores the impact of visuals in short educational videos produced by artificial intelligence (AI) on students' orientation toward management careers with the social cognitive career theory (SCCT). The quasi-experimental pre-test–post-test study enrolled 150 Indian higher secondary commerce students who underwent random assignment with the use of Excel RAND function to either an experimental group (AI-enhanced videos and workshop) or a control group (only a workshop). The major purpose of the intervention was to increase career-related self-efficacy, predictive outcome expectations, interest in management (INT), and reduce the career stereotypes. Although no significant differences were found in SCCT metrics across groups over time, AI visuals exposure led to a higher knowledge acquisition and INT careers among participants. The findings reveal that AI visuals may enhance awareness and engagement, but they are insufficient to change basic motivational beliefs. The findings illustrate the potential generative AI has as an education tool that is scalable and inclusive especially in resource-scarce regions. Nevertheless, it insists that such interventions should be placed in continuous, interactive, and thought-provoking learning contexts. The study also investigates how issues such as intervention duration, diversity of participants, and the ethical considerations on the production of authentic visuals can affect findings, providing implications for future studies.

Keywords: AI-generated visuals, management education, career orientation, self-efficacy, stereotypes, outcome expectations

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Abbreviations

AI	artificial intelligence
ANOVA	analysis of variance
CA	career aspirations
INT	interest in management
OOE	career-related outcome expectations
OSE	career-related self-efficacy expectations
SCCT	social cognitive career theory
STE	stereotypes

1 Introduction

While business and technology have evolved rapidly globally, the need for skilled management professionals remain unmet, hindering innovation and sustainable growth among modern organisations (Kennedy & Odell, 2023; Peri, Shih, & Sparber, 2015). Repeated efforts are being made to increase the opportunities for diverse groups in management careers, but consistent demographic gaps still affect who fills leadership pipelines. Positions of leadership are often occupied by people from dominant socioeconomic, gender, or ethnic backgrounds. Data from the National Centre for Science and Engineering Statistics (2023) indicate that women, minorities, and individuals with disabilities remain significantly underrepresented in leadership roles across STEM and management-related fields. Despite increasing efforts to promote inclusivity, the report highlights persistent disparities in access to leadership pathways, with white males continuing to hold a disproportionate majority of senior and executive-level positions.

Extensive research suggests that the career aspirations (CAs) of the students are established early and are closely related to the media and learning resources they interact with (Kearney & Levine, 2020; Salau, Essien, & Musa, 2022). Textbooks, videos, and other learning materials usually maintain stereotypes because they present managers as mostly male, assertive people who belong to the privileged class. Such depiction effectively alienates girls and minority students because they rarely see their experiences depicted. School-based workshops, career talks, and testimonials have been used to increase career narratives, which usually face limitations in logistics and a lack of representation of demographics, thus failing to challenge prevailing perceptions (Chiu, 2023; Stamer, David, Höffler, Schwarzer, & Parchmann, 2021).

As much as there has been increased focus on inclusive teaching methods, visual content remains behind in terms of representation (Stentiford, & Koutsouris, 2021). While traditional video production is hugely important, it requires enormous resources, takes a long time, and has difficulties to transfer uniformly to various educational settings (Winder, Bass, Schiele, & Buchner, 2024). The application of visuals, created with the help of artificial intelligence (AI), creates an effective way of creating photorealistic images, which are realistic in terms of the variety of ethnicities, genders, and professional positions. With these tools, educators are able to quickly generate different scenarios that encourage new ideas about leadership and emphasise a more diverse set of role models (Sun et al., 2023). However, there is a lack of empirical evidence to indicate how well the tools can be used in a classroom or extracurricular setting, especially when the audience is younger, and more receptive to visual content (Von Wangenheim, Hauck, Pacheco, & Bueno, 2021).

The lack of visually inclusive materials is particularly worrisome in early career exposure, as these experiences are likely to shape enduring career attitudes (Crutzen, De Kruif, & Vries, 2012). Under continuous exposure to the stereotypical representation of professionals, children might subliminally start seeing some careers as possible or impossible for them. When used in moderation, AI-generated visuals can transform such exposure by promoting underrepresented people into leadership positions (Cave, Dihal, Drage, & McInerney, 2023; Turner & Griffin, 2020). Through this research, we examine whether the use of AI-generated visuals in short educational videos can have a positive impact on students' attitudes toward management careers and broaden their CA (Xu et al., 2024).

The purpose of this study is to find out whether the inclusion of AI-generated visuals in short educational videos can improve students' outlook on management careers. It determines whether such visual interventions can increase self-efficacy, clarify outcome expectations (OOE), and increase interest in management (INT) areas. Based on the framework of the social cognitive career theory (SCCT), the study also examines whether AI-generated graphics can break down entrenched stereotypes about who is a fit "manager" (Lent, Brown, & Hackett, 2002; Newstead, Eager, & Wilson, 2023).

Despite the growing number of AI tools in career counselling, there is a preponderance of current applications that depend on text or voice-based conversational agents such as chatbots (Rajaraman, Arun, Kodieswaran, Kumanan, & Prem, 2024; Shilaskar, Bhatlawande, Sawle, Gupta, & Buche, 2024). These tools provide valuable personalised feedback, but they do not adequately address the power of visual representation, which plays a vital role in shaping students' first impressions and reinforcing occupational norms (Anger et al., 2024, Ferguson, & Lezotte, 2020). Visual aids, especially those created through generative AI, are yet underutilised in extending students' perspectives on managerial careers. This fact is significant because initial visual impressions often form the basis for lasting misconceptions about careers (Flathers, Smith, Wagner, Fisher, & Torous, 2024). This research responds to three pressing gaps that prior studies have overlooked:

- The persistence of sociocultural and gender-based barriers in choosing management as a career.
- The untapped potential of generative AI in visually portraying a diverse range of managerial roles.
- The lack of empirical evaluation on whether the effects of AI-generated visuals can extend beyond the initial novelty factor.

To address these gaps, the paper presented an integrated extracurricular programme with AI-rendered visuals in a short video that shows various managerial settings. These were paired with structured workshops to test the comparative effectiveness of such content in altering students' career perceptions, while addressing the common limitations of high production costs, limited access, and visual homogeneity in career guidance materials.

1.1 Structure of the Article

The structure of the article is organised systematically to guide the reader through a coherent academic investigation. It begins with Section 1, which outlines the rationale, background, and significance of the study, followed by a clearly stated research objective grounded in the SCCT. Section 2 is categorised into thematic subsections such as career stereotypes, the role of visuals in career education, applications of AI tools in learning environments, and identified gaps in the existing research. Next, Section 3 describes the research design, group allocation, instrumentation, and procedural steps in detail, ensuring replicability. Section 4 presents both quantitative findings from mixed ANOVA analyses and qualitative insights from open-ended responses, interpreting the data within theoretical and comparative frameworks. Section 5 synthesises the key findings and reflects on their educational implications. This is followed by Sections 6 and 7, where the study's constraints and pathways for the continued inquiry are critically discussed. Finally, the article includes Declarations, an Author Contribution Statement, and a comprehensive References list to ensure transparency and academic integrity.

2 Literature Review

2.1 Career Stereotypes and Media Representation

Stereotype research shows that stereotypes concerning the occupations of leaders and managers can weaken students' identification with such career options (Kearney & Levine, 2020). There was also a study by van Tuijl and van der Molen 2015). Such stereotypes often run through formal schooling and informal learning contexts and are reinforced by media portrayals that lead to bias. Since the diverse leaders are hardly ever shown in

leadership positions, the students tend to have poorer self-efficacy and weaker aspirations (Pelaccia et al., 2010; Shin, Lee, & Seo, 2018). Considering that early career orientations are determined by these experiences, the deficiency in visual and narrative representation in both commercial and educational media is an urgent need (Guenaga, Eguíluz, Garaizar, & Mimenza, 2022). To improve visibility of managerial positions, various measures have been adopted, such as interactive leadership workshops (Mohr, 2022), career presentations in classrooms (Stamer et al., 2021), and digital career guidance resources (Talib, Housni, & Radid, 2023). Despite the effectiveness, these approaches have shown, scaling them up, a broader demographic representation, and overcoming long standing stereotypes remain challenges. In addition, the use of traditional video testimonials can be costly to generate, and they may lose their appeal as time passes, hence reducing their long-term effectiveness as teaching aids (Creswell, Pacilio, Lindsay, & Brown, 2023).

2.2 The Role of Visuals in Career Education

The influence of visual stimuli on learners' career-related perceptions is particularly strong at the early stages of identity formation. Visuals tend to sway our gut feelings even before information is actively processed unlike written content. It is particularly important in career education because students are subject to visual representations in media, posters, textbooks, and videos in developing beliefs on who is likely to become a manager (Steinke et al., 2007). Although great strides have been made, most career education materials continue to follow a limited set of managerial prototypes, thus maintaining the status quo in terms of gender and cultural biases. To address this problem, academics and scholars are increasingly recognising the opportunities presented by inclusive visual storytelling in extending students' horizons in regard to career options. Nevertheless, it is still problematic and expensive to produce educational materials that reflect diversity. Therefore, although visuals are paramount in creating career awareness, there is a gap between educational needs and the current available technological tools (Molekoa, Ubisi, Sefotho, & Ferreira, 2021; Skulmowski, Nebel, Remmele, & Rey, 2021).

2.3 AI Tools in Educational Interventions

AI content generation has led to useful resources for education such as text chatbots, voice assistants, and AI-generated images. In these solutions, chatbot-based Q&A platforms have gained popularity in career counselling due to its ability to provide personalised interaction support (Rajaraman et al., 2024; Shilaskar et al., 2024). These technologies focus on the conversations of users, yet they disregard the key element of visual representation that is central to creating first impressions and biases among young learners (Sun et al., 2023). While chatbot-based platforms primarily provide interactive responses, image generators such as Midjourney and DALL·E 2 can generate vivid, representative images of managers in various roles in no time. This approach helps to develop very diverse and visually appealing career education content in a time-saving way. However, empirical studies are missing on how visuals constructed by AI affect crucial SCCT concepts, including self-efficacy and OOE (Chiu, 2023). Today, most research is about the potential of technology rather than actual learning results. This leads to the absence of practical guidance for educators who are aiming to integrate AI visuals into their teaching practises (Su & Mokmin, 2024; Zhang, Wang, & Zhang, 2024).

2.4 Gaps in Prior Research

Although there is an increase in interest in AI's opportunities to promote educational equity, important research gaps remain. First, research predominantly deals with the description of AI's educational potential

and does not directly assess its impact on SCCT constructs (such as self-efficacy, OOE, and career INT) (Lent, Paixão, Silva, & Leitão, 2010; Schaub & Tokar, 2005). Second, interventions using video or visual storytelling rarely compare AI methods to conventional lecture or text-based education activities (Stamer et al., 2020). Third, there are few data on the persistency of the positive effects of AI-generated imagery; even if AI visuals might initially attract the attention of students due to their novelty, it is unclear how they influence the long-term knowledge retention and stereotypes decline (Sun et al., 2023). Different from existing studies, this research systematically applies AI visuals into the SCCT model to investigate the influence on student perspective. The study uniquely examines the educational influence of generative AI on career development by comparing students exposed to AI-enhanced videos with those receiving traditional training (Jiang et al., 2024). Through this question, the research also progresses pedagogically, demonstrating how AI moves from being a gimmick to an integral aspect of increasing inclusivity, engagement, and diversity in management education.

3 Methodology

In this quasi-experimental, pre-test–post-test study, two parallel groups were included: a group that received visual content developed by AI was compared with a group that attended traditional leadership workshops without visual content. The aim was to measure the effects of AI-empowered video content on career-orientated psychological factors that were described by the SCCT.

3.1 Group Allocation and Design

Participants were randomly assigned to one of the two groups. Table 1 presents an overview of experimental and control group interventions.

Both groups participated in two 90-min extracurricular workshops delivered on consecutive days. The sessions included structured team-building simulations and managerial role-play exercises designed to simulate real-world decision-making in business contexts. The experimental group viewed three short AI-generated videos (1.5–2.5 min each), illustrating inclusive and diverse managerial scenarios, accompanied by narrative voiceovers explaining the depicted tasks (e.g., recruitment, global supply chains, and marketing strategy). The control group completed identical workshop activities without the video content.

3.2 Participants

A total of 150 students (92 males, 57 females, 1 undisclosed) between the ages of 17 and 18 participated in this study. These participants were enrolled in 11th and 12th grade (10 + 2 level) commerce stream programmes across various higher secondary schools in Jammu and Kashmir, India, which are known for their emphasis on entrepreneurship and STEM-integrated learning. Although they were pre-university students, they demonstrated strong aptitude and INT-related subjects and were actively participating in pre-college preparatory

Table 1: Overview of experimental and control group interventions

Group	Intervention	Sample size	Content	Visuals used
Experimental	AI-enhanced videos + leadership workshop	72	3 short video clips	Midjourney, DALL·E 2
Control	Leadership workshop without video intervention	78	Same activities as group A	None

curricula focused on business education (Mohr, 2022). Participants were randomly assigned to the experimental or control group using the RAND function in Microsoft Excel to ensure unbiased allocation. There were no statistically significant differences between groups at the baseline with respect to demographic characteristics or pre-test scores on the measured constructs ($p > 0.10$).

3.3 Instrumentation

Data were collected using tablet-based surveys administered both before (pre-test) and after (post-test) the intervention. The instruments were adapted from validated psychological and career development scales aligned with SCCT constructs. Table 2 presents a detailed summary of the scales.

Additionally, two open-ended sections were included:

- *Knowledge Gains (GKS/GKO)* – "What new information did you learn about management careers?"
- *New Interest (SCI/SSI)* – "What made you more interested in becoming a manager?"

3.4 Procedure

3.4.1 Video Development

Through Midjourney and DALL·E 2, three videos were created with the help of AI, each depicting a different management situation. The videos featured professionals of even gender and ethnicity mix, trying to break stereotypes.

3.4.2 Workshop Delivery

Both groups attended equal-duration workshops. At the beginning of each session, the experimental group viewed one video and then followed with discussion and completion of team tasks. The control group carried out the tasks with no videos shown to them.

3.4.3 Survey Administration

Two surveys that measured SCCT variables were gathered at different points in time: at the beginning of the first session and immediately after the second one. Simultaneous open-ended answers were attained.

3.4.4 Data Analysis

Examination of the quantitative data entailed use of a mixed analysis of variance (ANOVA) (Time × Group) test to test for any significant differences between the groups over time. Descriptive statistics were used for the stereotype questions and participants' written comments to gauge any perceptual shifts.

3.5 Hypotheses

Based on the SCCT framework, the study was designed to test the following hypotheses:

Table 2: Summary of constructs, sample items, reliability scores, and sources

Construct	No. of items	Sample item	Reliability (α)	Source
Self-efficacy (OSE)	4	"I feel confident in organising a group task."	0.85	Lent, Brown, and Hackett (1994)
OOE	4	"Being a manager can lead to good career benefits."	0.74	Bandura (1997)
Management interest (INT)	6	"I want to pursue a career in management."	0.86	Luo, So, Wan, and Li (2021)
CA	4	"I plan to study business in college."	0.93	Adapted from Kearney and Levine (2020)
Management stereotypes (STE)	10	"Managers lack people skills" (rated 1–7 scale individually)	N/A (individual items)	Developed for this study

- *H1*: Students exposed to AI-generated visuals will show higher self-efficacy in management-related tasks compared to the control group.
- *H2*: Students in the experimental group will report greater INT and more positive OOE than those in the control group.
- *H3*: Exposure to AI-enhanced videos will reduce stereotypical beliefs about who can be a manager

4 Results and Discussion

The results of the quasi-experimental analysis concerning how AI-generated visuals influence the career preferences of students in management are presented below. Findings were analysed based on the SCCT, which informed the development of the study's hypotheses (Lent et al., 1994; Lent, 2020). The major goal was to examine whether the introduction of AI-generated visuals into short educational videos can significantly enhance the self-efficacy, expected career outcomes, excitement about management, and removal of long-standing stereotypes about leadership roles. The absence of notable group-by-time interaction effects in the statistical analysis confirms the predictions made by SCCT (Bandura, 1997; Lent et al., 1994). SCCT highlights the fact that the formation of CA relies on reinforcement that continues, social modelling, and self-reflection aside from exposure and interest that may be lacking in brief interventions. The findings suggest that, although AI-generated visuals can enable faster knowledge intake and increase perceptual engagement, they are not enough to change underlying motivational structures unless placed within a sustained, socially supported educational environment (Luo et al., 2021; Renninger & Hidi, 2016). In addition, the decrease in the interest of management among both groups might be caused due to a fundamental rethinking of the field of management, where such aspects as intricacy and duties of the field can calm down overly optimistic views. This is consistent with the view that obtaining realistic insights, while diminishing unfounded optimism, increases practical career awareness, and is a valuable educational outcome (Lent, 2020).

4.1 Group Comparison of Key Constructs

The results of the mixed ANOVA are presented in Table 3. The *p*-values (0.374–0.896) support the fact that there was no significant interaction effect between time and group for management interest (INT), self-efficacy (OSE), OOE, or CA.

A small but statistically significant main effect of time was found for management interest, which declined across both groups (p = 0.011, partial η^2 = 0.05). This unanticipated result suggests that the intervention, regardless of format, may not have aligned with student expectations or may have revealed perceived challenges of a management career, lowering enthusiasm. These findings did not support H1 or H2. This aligns with Stamer et al. (2021), who found that video-based interventions alone fail to change core beliefs unless paired with active reflection. The novelty of AI visuals alone appears insufficient to alter deeply rooted constructs in a short-term context (Lent, 2020; Renninger & Hidi, 2016). Figure 1 shows the pre- and post-test mean scores by group.

Table 3: Mixed ANOVA for key constructs

Construct	*F* (1,148)	*p*-value	Partial η^2	Time effect
Management interest (INT)	0.80	0.374	—	Decline (p = 0.011)
Self-efficacy (OSE)	0.65	0.422	—	Not significant
OOE	0.02	0.896	—	Not significant
CA	0.08	0.780	—	Not significant

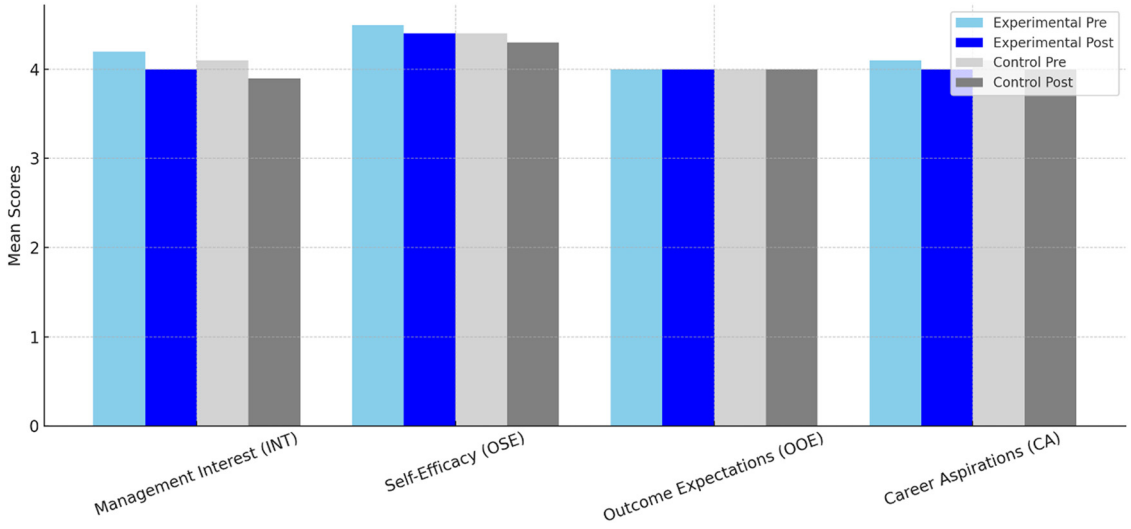

Figure 1: Pre- and post-test mean scores by group.

4.2 Descriptive Free Response Patterns

Despite the absence of significant ANOVA effects, free-response data revealed informative differences between the groups.

- *Knowledge gains:* Sixty-six of 72 participants in the experimental group reported learning something new about management careers, compared to 60 of 78 in the control group. Notably, 49 experimental participants mentioned learning about diverse types of professionals in management, compared to 37 in the control group.
- *Sparked interest:* All 21 students (100%) in the experimental group who reported newfound career interest attributed it to the videos. No such attribution occurred in the control group.

Figure 2 shows the percentage reporting knowledge gains by source.

These descriptive results partially support H3 because, due to the use of AI visuals, awareness was increased while inspiring motivation. This supports Chiu's (2023) idea that generative AI can broaden conceptual thinking although there are no congruent changes in immediate SCCT variables. However, subsequent transformation of interest into continuous motivation might rely on continuous reinforcement (Sun et al., 2023).

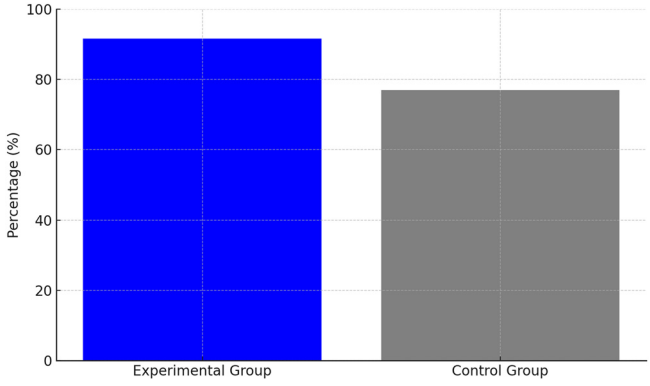

Figure 2: Percentage reporting knowledge gains by source.

Table 4: Hypothesis evaluation summary

Hypothesis	Supported	Summary
H1: AI visuals will improve self-efficacy	Not supported	No significant change in OSE
H2: AI visuals will increase INT and OOE	Not supported	INT declined across both groups; OOE unchanged
H3: AI visuals will reduce stereotypes	Partially supported	Descriptive improvement, but no statistical significance

4.3 Stereotype Trait Changes

Analysis of individual stereotype trait ratings (e.g., "Managers lack people skills") showed modest or mixed shifts in the experimental group. Several traits moved toward mildly balanced perspectives, but most remained the same. The ratings of the control group stayed pretty much the same throughout the study. These data reveal the strong presence of leadership stereotypes and how challenging it is for them to change without the facilitation or constant interaction (Luo et al., 2021). Due to the lack of structured opportunities for reflection, it may be possible that the increased knowledge and awareness did not result in larger changes (Callens & Elen, 2015).

4.4 Hypothesis Evaluation Summary

Table 4 presents the hypothesis evaluation summary.

4.5 Comparison with Prior Studies

Table 5 presents the comparative overview of methods and outcomes.

This extensive review confirms the agreement that multimedia interventions only fall short of their potential when not supplemented by reflective and dialogic processes (Luo et al., 2021; Renninger & Hidi, 2016). Generative AI can lower production barriers and increase diversity, but its pedagogical impact depends on how it is embedded in the learning process.

5 Conclusion

The aim of the current research was to test whether the use of AI-generated visuals in short educational videos would have a significant effect on students' management career orientation by enhancing self-efficacy, changing expectations, supporting interest and aspirations, and reducing stereotypes. Using the SCCT as a theoretical framework, the inquiry explored psychological and perceptual effects of a distinct pedagogical approach that involved the use of generative AI in business education. The intervention was mainly targeted at Indian commerce students at the higher secondary level, those who had completed high school and were still

Table 5: Comparative overview of methods and outcomes

Study	Media strategy	Sample	Major outcomes
Stamer et al. (2020)	Conventional expert filming	~100 varied students	Enhanced knowledge, little stereotype change
Mohr (2022)	Role-play workshops	Gifted adolescents	High initial interest, modest confidence gain
Current study	AI-generated short videos	150 mgmt students	Knowledge gains; no change in SCCT metrics

prepping for university but were already learning business related subjects using structured coursework. It was discovered that visuals created by AI bring significant increases to students' knowledge feeling and first encounters with management concepts but do not promote changes in career motivation, self-efficacy, or outlooks on their own within a limited period. This outcome is congruent with SCCT expectations and shows that career progress involves iterative, context-responsive engagements, rather than instant responses to stand-alone teaching methods. Despite these limitations significant insights were revealed through descriptive analysis. Students who were exposed to the AI generated visuals exhibited increased knowledge acquisition and often quoted the videos as what inspired them to pursue careers in management. These findings suggest that brief interventions may not change underlying beliefs or motivation, but they can initiate first engagement and curiosity.

The study demonstrates how AI visuals can be useful tools to start engagement, particularly in settings where representation is diverse and resources are modest. Nevertheless, the effectiveness of such visuals largely depends on how they are compatible with pedagogical practices, which support dialogue, frequent interaction, and mentorship. Initially, the research reveals that the use of generative AI in education is practical and affordable, which makes a wider array of representations reachable for students. Since mainstream educational materials often emphasise a narrow set of demographic profiles, this intervention added diversity to the representation of who can become a manager. Nevertheless, the lack of statistical significance for key factors is a serious limitation of the use of visuals as the only trigger of behaviour or attitude change. It reveals that although visual content might be entertaining and educative, any meaningful behavioural or attitudinal change is reliant on a combination of educational efforts that include reflection, discussion, and long-term support. The results demonstrate how deeply rooted occupational stereotypes are, and how challenging it is to overcome them using short interventions only. Thus, this work contributes to the current discussion about AI and education and enriches our understanding of processes of career identities construction and transformation. To maximally capitalise on the tools' transformational potential, future initiatives should enrich their pedagogical underpinnings and adjust to different learning groups.

6 Limitations

The results of the study on the application of the AI visuals to transform career orientation should be considered in the context of several mentioned limitations. First, the emphasis was on the commerce stream students already in business education programmes. A ceiling effect, whereby the students already had strong management-related self-efficacy or interest, could have prevented the measurement of much improvement. The involvement of students with a more varied or neutral view on management careers in further research may show clearer trends.

Second, the span of the intervention was rather narrow, two 90-min sessions. A brief intervention period may have left students without the chance to process new information or change their preconceptions. Short interventions rarely succeed in generating durable psychological change, especially in expectations and stereotype resistance, unless participants are provided with reinforcement or encouraged to think about their experiences.

Third, the narrowness of the population sampled (17- to 18-year-old commerce students) restricts the extent to which the results can be generalised to the rest of the population. People from other fields, and not necessarily commerce, or those with more working experience may respond to such initiatives differently. Since management aspirations change with further social, academic, and work experience, it is necessary to study the change in these motivations across educational levels and disciplines in future studies.

In addition to these methodological limitations, the empirical work experienced several practical and ethical problems. Logistically, some schools lacked infrastructure (such as digital projectors and audio-visual support systems) required to guarantee equal distribution and access to AI-supported materials and so the learning environment consistency was compromised. Ethically, the wide and inclusive distribution of visuals generated by AI has significant challenges, which include authenticity, informed consent, and cultural

sensitivity. If not carefully supervised, artificially created pictures can have visual prejudices or misleading representation. It is essential to have a clear ethical framework for the development and presentation of AI-generated visuals so as to maintain accuracy, inclusivity, and proper context.

7 Future Research Directions

Going forward, the laid-out limitations stimulate a straightforward list of avenues for exploration. Researchers should try to attract a more heterogeneous sample, asking students in humanities, science, and vocational studies, undergraduates, and working people to participate in order to discuss differences in the perception of careers in various educational and social settings.

Second, there is the need for longitudinal investigation to determine the effect of AI-supported visual strategies on self-efficacy changes, future career orientations, and stereotype barriers in the long term. The tracking of participants' self-reported beliefs and observable behaviour throughout long periods might form meaningful data on intervention effectiveness over time.

It is also important for the future research to test and improve comprehensive pedagogical models that combine AI visuals with such learning strategies as journaling, collaborative conversations, mentoring programmes, and situation-based instruction. Only with these integrated teaching frameworks can generative AI successfully change restrictive career narratives.

In the end, there is a need for uniform ethical guidelines on the usage of AI visuals in the educational setting. This requires the promotion of image traceability, the correction of cultural stereotypes, and the presence of all the required permissions. Educator, ethicist, and AI developer collaboration would immensely improve the development of scalable and engaging but fair and accountable educational tools.

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