

Investigating the Role of Orientation in Enhancing Student Experience within Online Learning

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Abstract: This study evaluates a dual-track orientation program aimed at enhancing online learning readiness among first-year undergraduate students. The program combines a core module covering essential online readiness skills with personalized learning pathways based on self-assessment in six readiness dimensions. Results from 267 participants revealed a high completion rate and significant improvements in confidence, technical self-efficacy, and social inclusion awareness. Participants reported increased satisfaction and readiness for online learning. The findings highlight the dual-track program's effectiveness in supporting diverse student needs, providing an evidence-based model for enhancing online learning readiness.

Background

As online learning becomes increasingly integral to higher education, preparing college students for both academic and non-academic challenges has become more crucial than ever. First-year college students, in particular, face several hurdles in online education (Dumford & Miller, 2018; Makarova, 2021; Schmitz & Eisenmann, 2023). Essential skills such as self-motivation, time management, and digital communication play a vital role, as insufficient online learning readiness can hinder students' success in online learning environments. Moreover, research underscores the importance of targeted preparation in enhancing students' academic performance and overall success in online learning (Conley, 2007; Tinto, 1993; Kuh et al., 2010). This evidence points to the necessity of providing more robust orientation programs that support diverse learning needs before engaging in online coursework.

Despite these needs, many online orientation programs continue to use standardized content that does not account for students' varying levels of online learning readiness (Arrowsmith, 2017). Many of these programs follow a one-size-fits-all model that does not effectively equip first-year college students for the challenges they may face (Connolly, 2019). This approach often leads to low retention and completion rates, as some students experience that the program does not bridge their gaps in need. Consequently, completion rates in such programs tend to be low, even for those who need structured guidance and support (Colucci, 2020; Scagnoli, 2001).

To address this challenge, we establish and examine a dual-track orientation model that integrates essential, foundational knowledge and skills with self-directed, personalized learning pathways suited to each student's level of readiness. This approach enhances their readiness to navigate the challenges of online learning.

Theoretical Framework

The dual-track orientation program is grounded in educational theories that support students at their current level while addressing the diverse needs of students entering online learning. Self-determination theory (Deci & Ryan, 2012) emphasizes the importance of autonomy, competence, and relatedness in enhancing intrinsic motivation. A personalized orientation program can support students' autonomy by allowing them to self-assess their readiness levels and take learning paths. Self-efficacy theory (Bandura, 1977) focuses on individuals' belief in their ability to succeed in specific situations. By tailoring the orientation experience to match students' online learning readiness levels, the program can enhance self-efficacy by providing achievable challenges and relevant resources for online learning. Additionally, the principles of universal design for learning (UDL; Meyer et al., 2016) advocate for fostering inclusive learning environments that accommodate individual learning differences. Personalizing orientation pathways through self-assessment aligns with the principles by providing varied engagement, representation, and expression methods, enabling all learners to effectively interact with the materials, regardless of their initial readiness levels.

Purpose of the Study

This study focuses on three key questions. First, it examines how standard orientation modules influence students' initial readiness for online learning. Second, it investigates whether personalized learning path modules can enhance specific confidence based on self-assessment. Finally, it explores whether this dual-track approach can foster a sense of inclusivity, allowing students from diverse backgrounds to feel supported in their online education.

Method

Program Design

The dual-track orientation program was developed through a collaborative design approach, incorporating insights from both educators and students to meet the real needs of first-year college students. The design process was iterative via utilizing feedback from the needs assessment survey and focus groups to make the orientation experience more aligned with their needs and readiness levels over multiple cycles.

The program consists of two main components: (a) standard orientation modules and (b) personalized learning path modules. The standard orientation modules cover six fundamental areas necessary for online learning success, including time management, digital literacy, and communication skills. These modules provide a solid foundation necessary for online learning and were intended to be completed in one hour (10 minutes per module).

Following the completion of the standard modules, students were required to take a self-assessment to determine specific areas where additional guidance and resources might be needed. Based on their assessment results, individuals were guided to personalized learning paths with up to six additional modules targeting specific skills such as self-directed learning, motivation, technical self-efficacy, learner control, online communication, and social inclusion awareness.

Participants

The study included 267 first-year undergraduate students, representing diverse backgrounds in terms of gender, areas of study, and online learning experiences, with 53% identifying as female.

Measures

Data were gathered through pre- and post-orientation surveys with a 5-point Likert scale ranging from “very dissatisfied” to “very satisfied,” and focus groups to assess changes in students’ readiness, confidence, and satisfaction. The online learning readiness scale (OLRS; Hung et al., 2010) was employed as a self-assessment tool, allowing students to gauge their initial readiness for online learning. Through multiple focus groups, we incorporated the dimension of social inclusion awareness to highlight the importance of diversity and inclusivity. The revised OLRS assessed six key dimensions on a 5-point Likert scale: (a) self-directed learning, (b) motivation, (c) technical self-efficacy, (d) learner control, (e) online communication, and (f) social inclusion awareness. After completing dual-track modules, focus group discussions also provided students’ narrative experiences and reflections on the orientation program.

Procedure

The study began with a baseline confidence and readiness assessment through a pre-orientation survey. Students then completed the six standard orientation modules. Following that, each student took a self-assessment, which determined their placement into one or more of the six personalized learning paths. Each personalized module offered tailored resources and guidance. Finally, students completed a post-orientation survey, and volunteer students participated in focus group discussions to provide further feedback.

Data Analysis

Quantitative data from the surveys were analyzed using descriptive statistics and paired t-tests to identify changes in readiness and confidence levels. Qualitative data from focus groups were thematically analyzed to uncover patterns and insights into students’ perceptions of the orientation program’s effectiveness.

Results

Completion Rate and Time Spent

The overall completion rate for the standard orientation module was 97.38%, with 260 out of 267 students completing the program as a requirement. On average, participants spent approximately 54 minutes on the modules (9 minutes per module; SD = 9.8 minutes), reflecting anticipated engagement with the content.

Quiz Performance and Confidence

Students demonstrated strong understanding, with an average quiz score of 87% correct answers (SD = 8). A significant increase in overall confidence was observed. Statistical analysis revealed $t(259) = 13.05$ ($p < .001$), and Cohen's $d = 0.66$, indicating a medium-to-large effect.

Overall Satisfaction

The program received positive feedback, with 92% of students rating their satisfaction as either "very satisfied (66%)" or "satisfied (26%)". Only 4% rated their experience as "neutral" (4%), while 4% rated it as "dissatisfied" (2%) or "very dissatisfied" (2%).

Personalized Learning Paths

Table 1 shows the distribution of students assigned to each personalized path based on a cutoff score (4 or below) derived from their self-assessment results, along with the completion rates for each path. Notably, technical self-efficacy had the highest number of students assigned (56% of total participants) and a completion rate of 92%.

Table 1

Number of Students Assigned to Each Path and Completion Rates (n=260)

Personalized Path	Number of Students Assigned*	Percentage of Total	Completion Rate
Self-directed learning	118	45%	93%
Motivation	102	37%	91%
Technical self-efficacy	147	56%	94%
Learner control	90	34%	92%
Online communication self-efficacy	83	30%	90%
Social inclusion awareness	110	41%	93%

*Note: Participants could be assigned to multiple modules based on their self-assessment results.

Self-Assessment Score Improvement

Table 2 displays the pre- and post-orientation scores across each personalized path dimension. Significant improvements were observed across all dimensions, with the highest effect size in technical self-efficacy ($t = 6.15$, $p < .001$, $d = 0.50$). These findings indicate that personalized paths were also effective in addressing specific readiness needs, with notable effect gains in the other dimensions.

Table 2

Difference of Pre-/Post-Personalization Self-Assessment Scores

Personalized Path	n	Mean Mean		SD	t	p*	d
		(Pre)	(Post)				
Self-directed learning	118	3.20	3.60	1.50	2.93	.004	.27
Motivation	102	3.25	3.60	1.40	2.50	.014	.25
Technical self-efficacy	147	3.10	3.70	1.20	6.15	< .001	.50
Learner control	90	3.05	3.45	1.30	2.92	.004	.31
Online communication self-efficacy	83	3.00	3.40	1.50	2.39	.019	.27
Social inclusion awareness	110	3.15	3.55	1.40	3.00	.003	.29

*Note: The significance level is set at $p < .05$

Discussion and Implications

By tackling both layers of online learning readiness, the dual-track orientation program effectively prepared students for the essential requirements of online education. The program fostered notable enhancements in baseline and targeted readiness dimensions. Furthermore, incorporating social inclusion awareness as a dedicated readiness path fostered increased sensitivity to inclusiveness in online learning environments. This aligns with recent findings that emphasize the importance of fostering inclusivity and social connectedness in various educational contexts (Page et al., 2021).

The significant improvements in readiness dimensions support the value of personalization and highlight the importance of individual assessment in supporting student readiness in online education. This positive reaction to tailored pathways is aligned with the self-determination theory, which indicates that with relevant content, students are willing to build their confidence and skills in areas where they struggle. The increased readiness and confidence likely contribute to improved academic persistence and reduced dropout rates (Kuh et al., 2010), as students feel more capable of tackling the challenges of online learning demands.

To enhance the effectiveness of the dual-track orientation program, institutions should consider the following strategies. First of all, leaders, faculty, and support staff should work closely together to tailor resources that meet student needs and institutional goals. Integrating assessments (e.g., pre-orientation readiness assessment, personalized pathway self-assessment, and continuous feedback and reflection assessment) can pinpoint areas where students may require additional

support, facilitating further personalization of their learning pathways. Regular check-ins and follow-up facilitation are also critical to reinforce their learning journey during and after orientation.

In addition, embedding early interaction with faculty and peers through virtual meet-and-greets, peer mentorship programs, and faculty-led webinars can help foster a sense of community and enhance engagement. Furthermore, expanding the program to encompass other tracks (e.g., professional services, mentorships, and periodic refreshers) can offer ongoing support and encouragement systems.

Limitations

This study has several limitations. First, relying on self-reported measures may introduce potential biases, as students may overestimate or underestimate their readiness and confidence levels. Additionally, while immediate improvements in readiness and confidence were observed, the study did not assess the long-term impact of the dual-track orientation program on students' academic success and retention. Finally, the study included limited qualitative insights, which may have constrained a deeper understanding of students' subjective experiences and the specific challenges they face both within and outside the program.

Future Directions

The dual-track orientation program supports first-year college students transitioning to new online learning environments. This approach can be a valuable model for institutions seeking to enhance student preparedness for online learning. Future directions could include AI-assisted personalization, the integration of virtual-reality simulations for immersive readiness experiences, and course-level collaborations to develop a more resilient support framework for the evolving needs of new-generation online learners.

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