

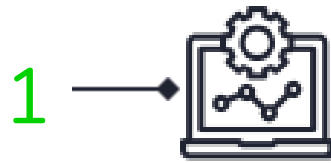
Optimizing Training Effectiveness: Analyzing Performance Trends in the Skills and Competencies Development Program

Dipita Dia Biswas

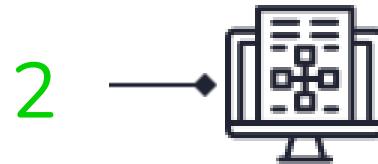




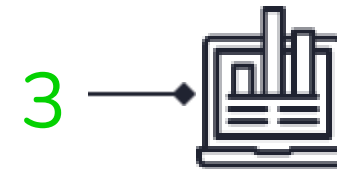
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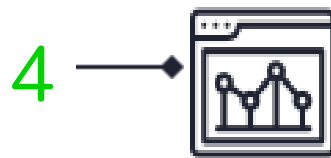
Project Mandate



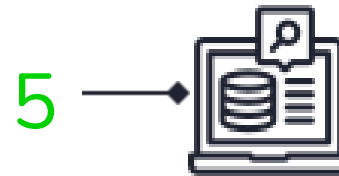
Overview



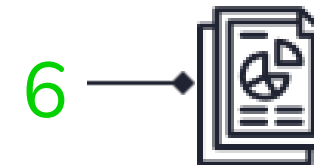
Performance Trends



Course Sequence



Training Formats



Recommendation





Project Mandate



Nexus Logistics Solutions (NLS) aims to leverage employee assessment data from the Skills & Competencies Development Program to derive comprehensive insights into training effectiveness. This analysis will focus on:

- **Skill Level and Performance Trends:** Identifying patterns in skill acquisition across different courses and locations.
- **Impact of Course Sequence:** Assessing whether the order in which employees complete courses influences their performance.
- **Comparison of Training Formats:** Evaluating the effectiveness of in-person versus virtual training delivery.

This initiative is essential for enabling data-driven decisions that will improve training program effectiveness, enhance employee skill development, and ensure that training efforts align with NLS's strategic objectives.



Foundation Course



Course 101: Logistics Software Essentials



Course 901: Logistics Software Essentials Virtual



Course 902: Intro to NERP Virtual



Course 102: Intro to NERP

Course 101

has the **highest** individual enrollment with **10%**, of employees choosing to focus solely on this foundational course.

Highest Improvement



Shanghai

Frankfurt

Buenos Aires

Los Angeles



Course 105: Supply Chain Optimization Strategy has an improvement of **389.8%** in application scores and **355.6%** in proficiency scores.

Performance Difference

Virtual courses have a **higher participation rate(Course 904)** and improvements are also as high as in-person course



The virtual class model **does not affect improvement** and can also give students more time to arrange their own affairs.



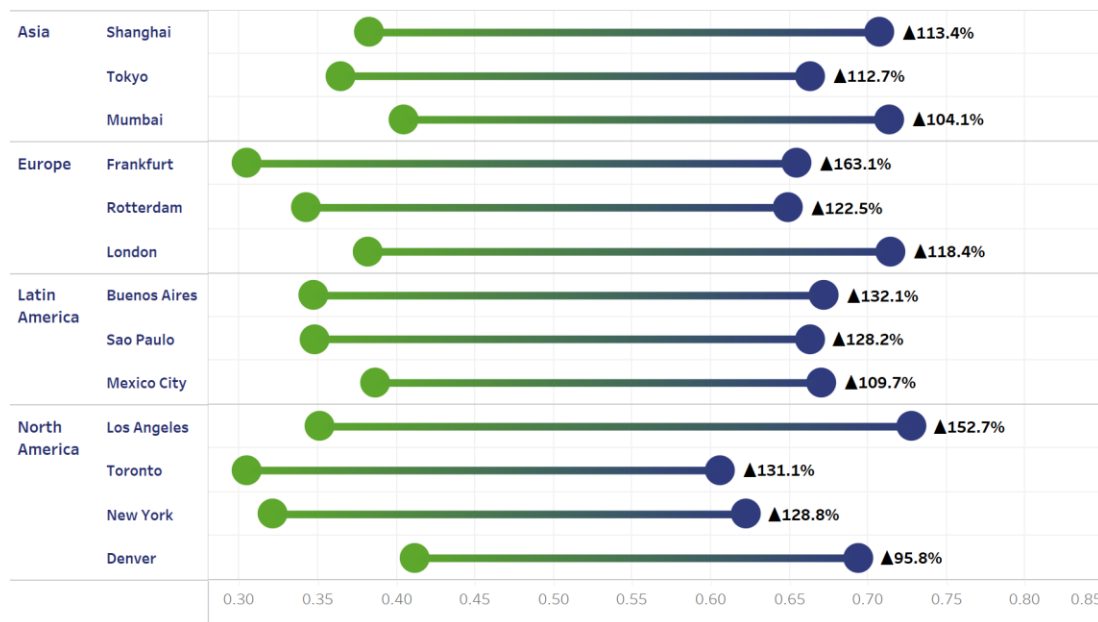
Skill Level and Performance Trends



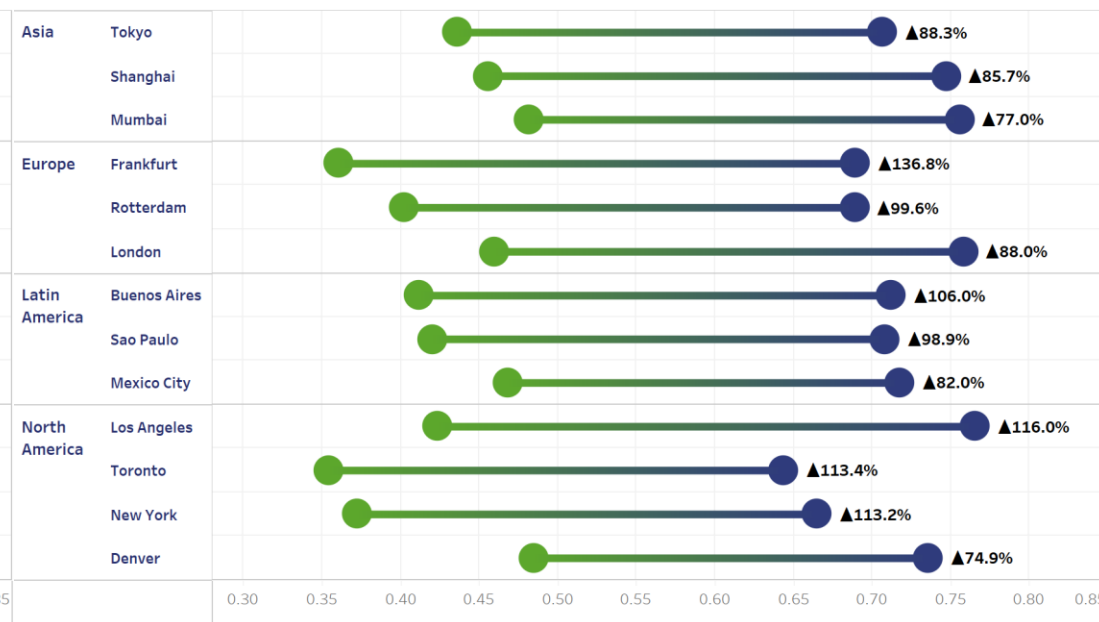
Score Improvement Shows No Significant Difference Across Regions



Application Score Improvement by Region



Proficiency Score Improvement by Region



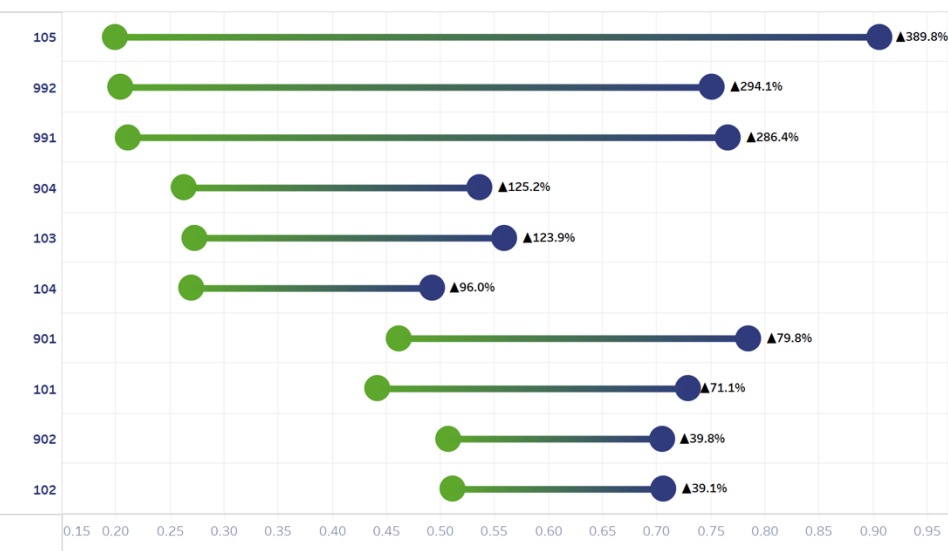
- **Shanghai, Frankfurt, Buenos Aires, and Los Angeles** have achieved the highest score improvements within their respective regions. This suggests that these cities could serve as best practice models for other areas in their regions.
- Despite **Latin America** having a significantly higher **participation rate of 53.7%**, its performance has **not surpassed** that of other regions with **lower participation rates**.



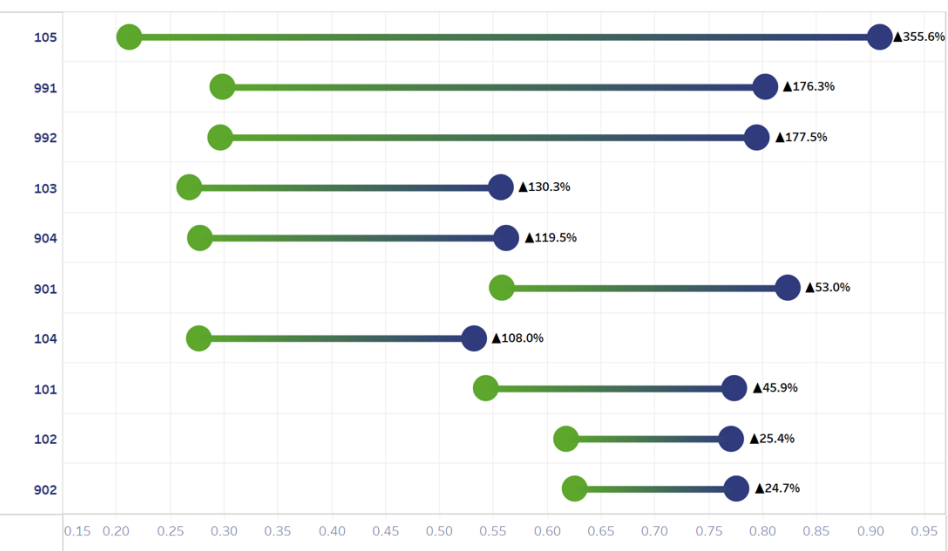
Supply Chain Optimization Strategy course has the highest score improvement rate of over 350%



Application Score Improvement by Courses



Proficiency Score Improvement by Courses

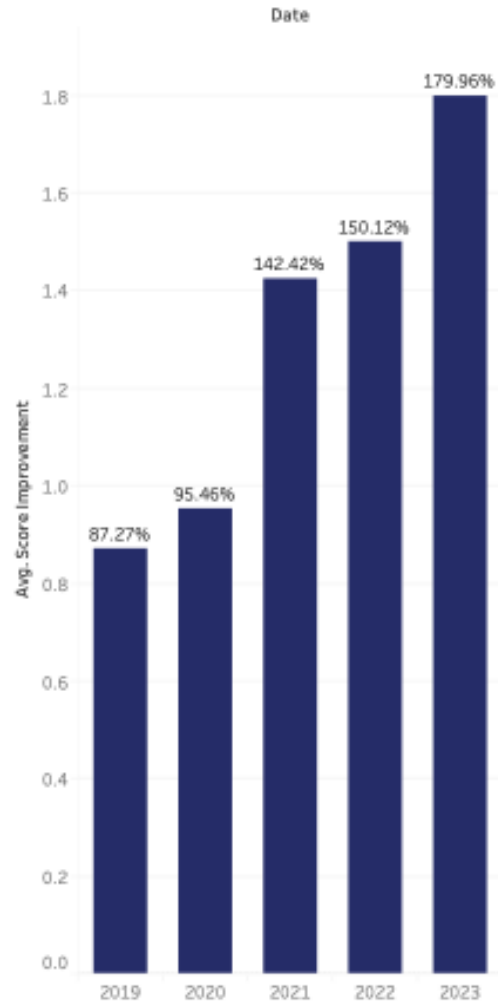


- Course **Supply Chain Optimization Strategy** stands out significantly, showing the highest improvement in both application scores **(389.8%)** and proficiency scores **(355.6%)** which indicates that the content of the course helps the employees to improve their skills and competencies.
- Courses **Logistics Software Essentials**, **Intro to NERP**, and **Intro to NERP - Virtual** exhibit the **lowest improvements** in both application and proficiency scores across all regions, seeing only a **38% - 42%** improvement in all **four regions**. This indicates that the **content of the course needs to be changed** as it does not contribute much to the improvement of the skills of the employees.
- Courses **Cybersecurity in Supply Chain Managements** and **Supply Chain Optimization Strategy** have the **lowest participation rates** of **3.7%** and **5.1%** respectively but **lead in overall score improvement**.

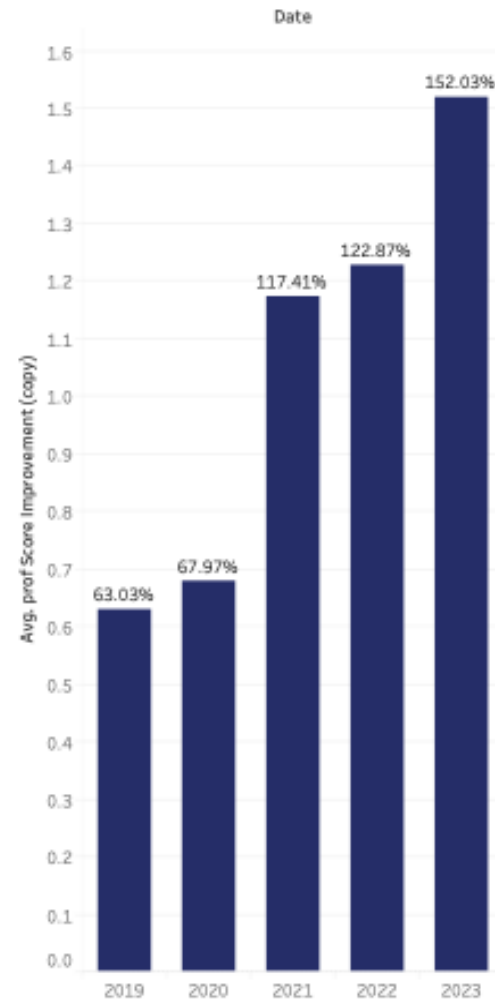


Score Improvement Increases Progressively Over the Years

Application Score Improvement Over Years



Proficiency Score Improvement Over Years



- Both application and proficiency scores have shown **consistent growth each year**, indicating a steady improvement in the overall quality of course material.

Prioritize Course Improvement over Participation Rates



Leverage High-Performing Locations

Conduct case studies in Shanghai, Frankfurt, Buenos Aires, and Los Angeles. Then create a framework that can be replicated in other regions for performance enhancement.

Promote High-Impact Courses

Expand and promote the **Supply Chain Optimization Strategy** course, which has shown excellent results, to drive skill improvement company-wide.

Revamp Underperforming Courses

Redesign or replace courses like **Logistics Software Essentials** and **Intro to NERP** to improve their low impact on skill development.

Boost High-Impact Course Enrollment

Introduce targeted awareness campaigns, incentivize participation in high-impact, low-participation courses, and explore making them a key part of professional development pathways.

Performance vs Participation

Consider targeted interventions or personalized learning solutions in regions with high participation but low improvement.

Continue to Evolve Course Content

Schedule regular content reviews and integrate feedback loops with employees and managers to ensure the curriculum stays relevant and impactful.

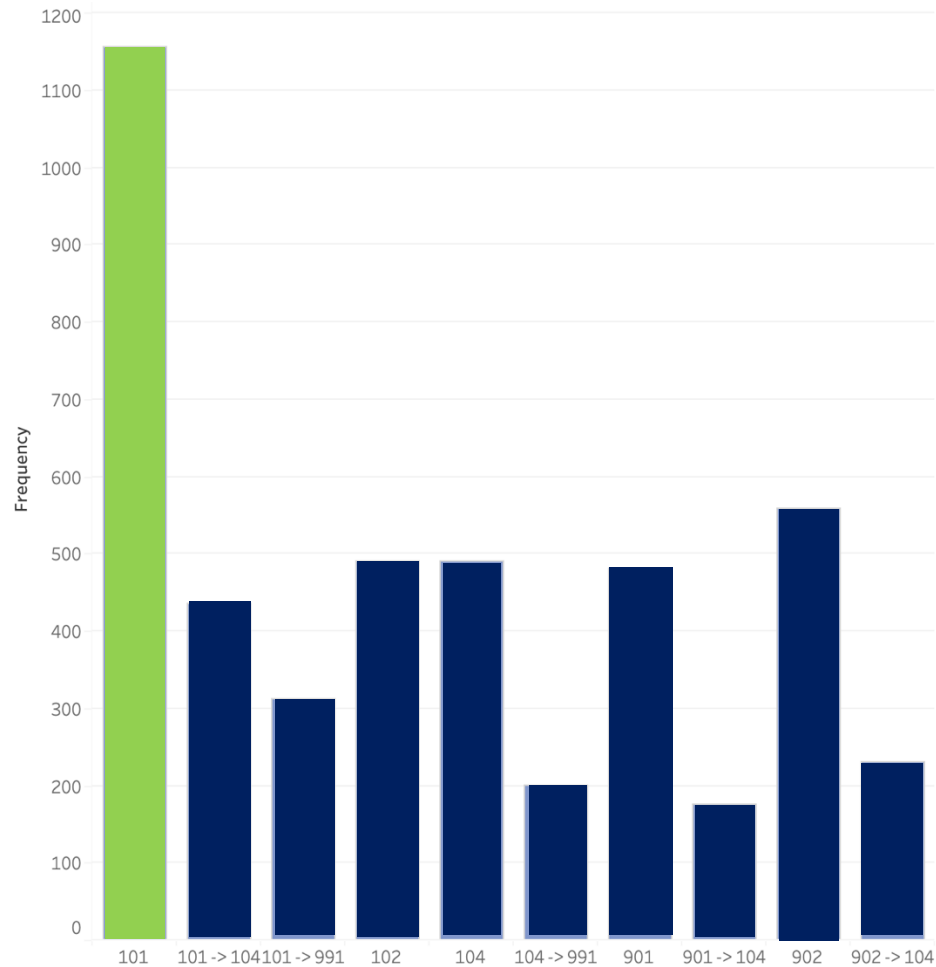


Impact of Course Sequence





64% of the employees learn **more than two courses**. **Course 101: Logistics Software Essentials** has the highest individual enrollment, with **10%** of employees choosing to focus solely on this foundational course.

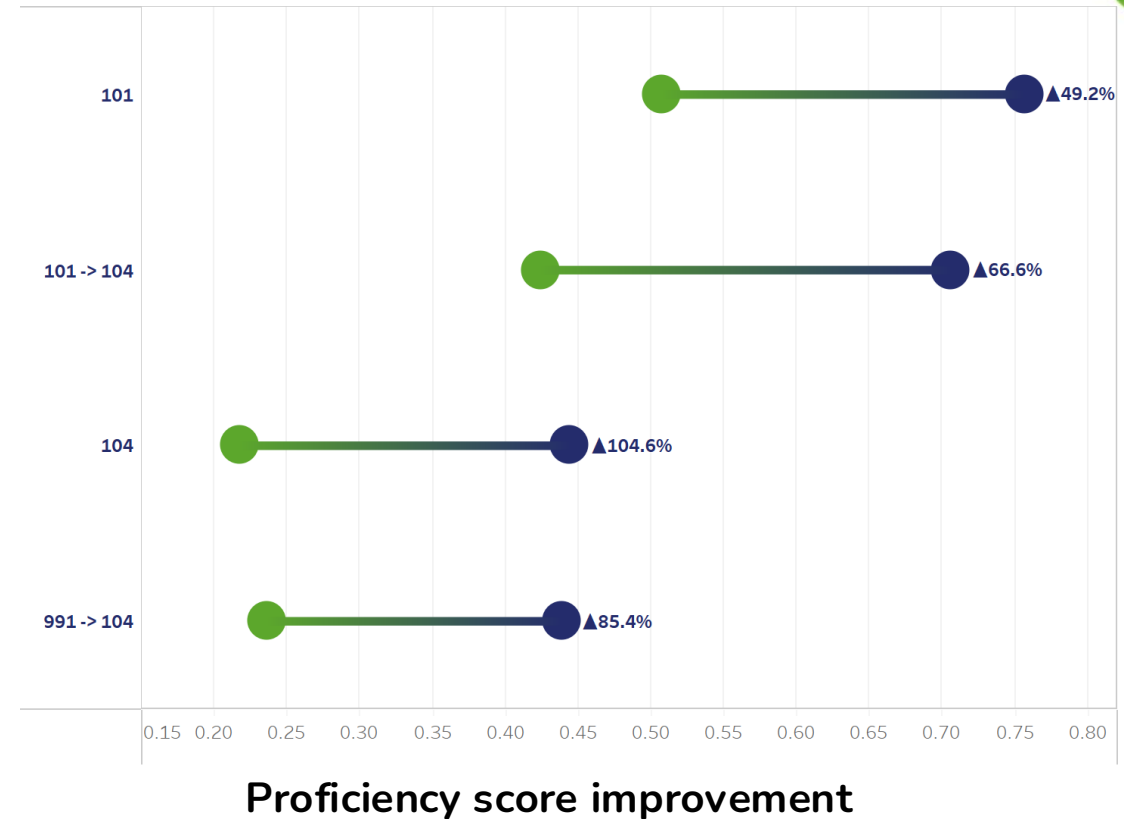


Among the top **10** courses with the highest learning order, **most enrollments** involve **employees taking only a single course**. Noticeably, there are **5** course order that the employees **take more regularly than the others**

The most common sequence of courses taken by employees is from **Logistics Software Essentials** (Course 101) to **Advanced Transportation Management Systems** (Course 104)

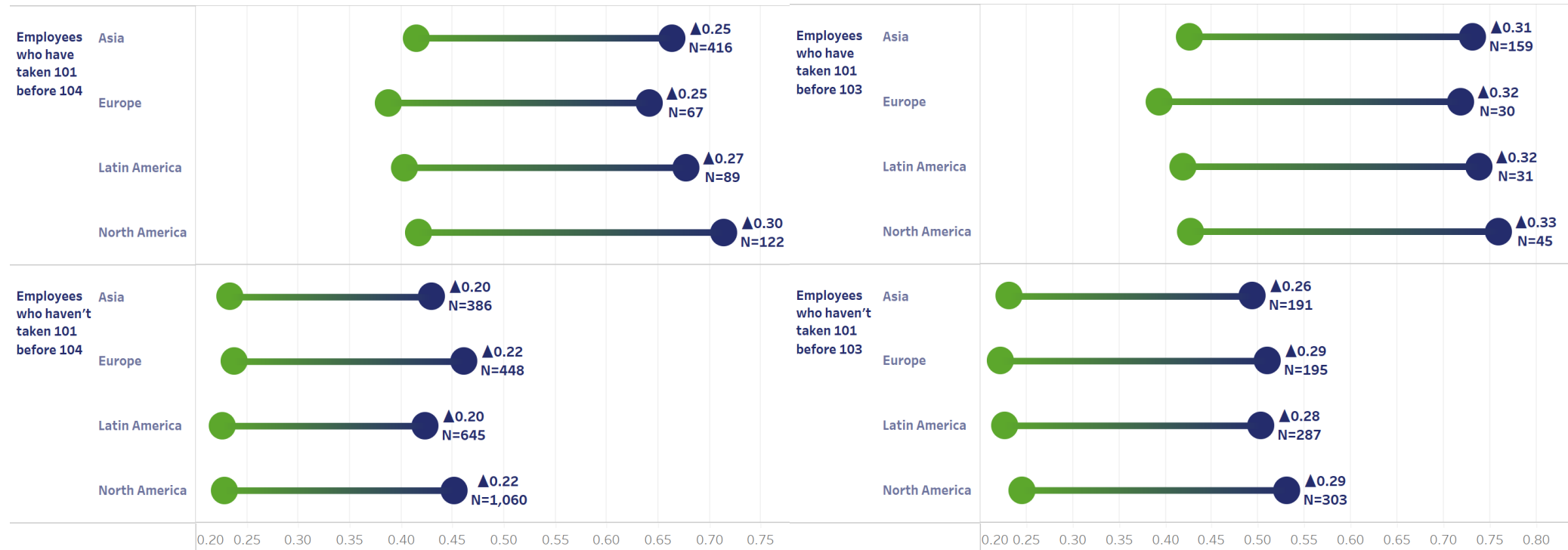
The top **5** course sequences primarily involve progressing from **foundational courses to more advanced courses**. This pattern reflects a strategic approach to learning, where employees build competence gradually, ensuring they are well-prepared for advanced concepts.

Course orders have significant impact on the employee's score improvement (1/3)



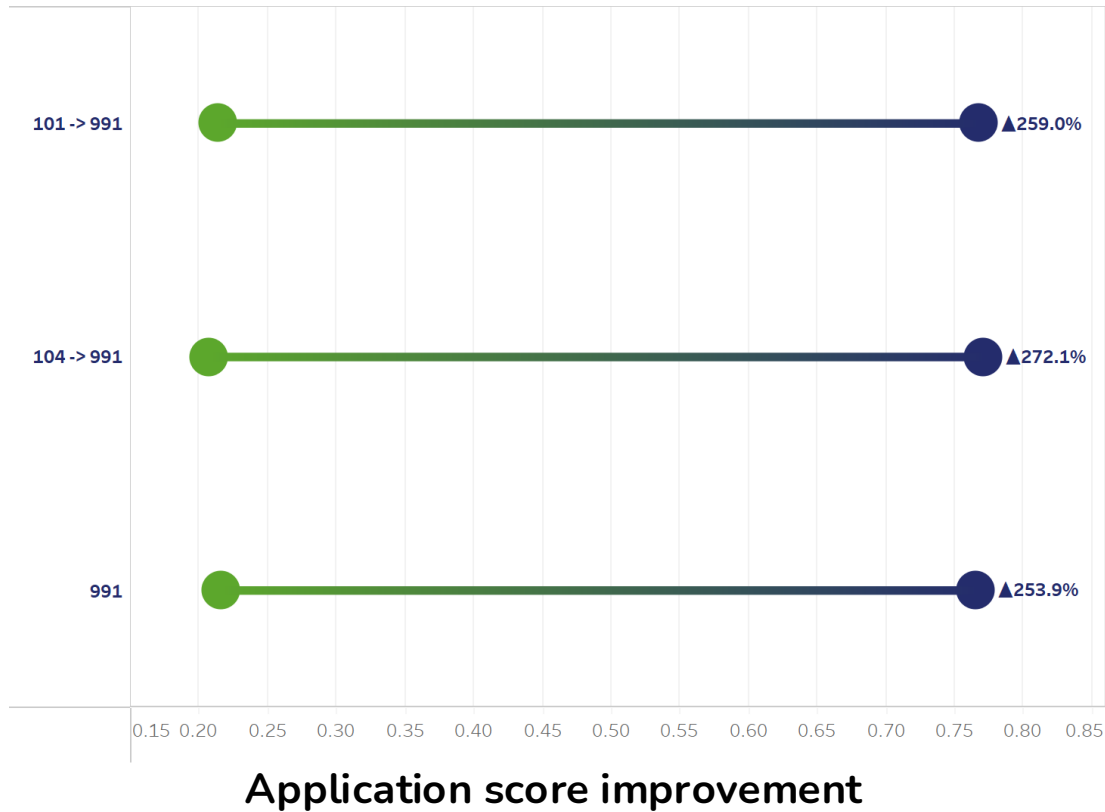
- **Proficiency scores** improve **significantly** when employees follow a structured course progression, starting with foundational courses and then moving on to advanced courses (from **Course 101** to **Course 104**).
- Employees who **focus solely** on the **foundational Course 101** show **less overall improvement**.
- Enrolled in specialized courses (**Course 991**) before taking the advanced courses (**Course 104**) demonstrate **lower gains** in **proficiency** and practical **application overall improvement**.

Course orders have significant impact on the employee's score improvement (2/3)



- **Employees who have taken 101 - Logistics Software Essentials (Intro to TMS & WMS) demonstrate significantly better performance when taking 103 - Advanced TMS and 104 - Advanced WMS:** Evidenced by both a much higher intake score, indicating a deeper initial understanding of software essentials, and a greater improvement in outcome scores, reflecting a better grasp of the content after completing the courses.
- **Actions should be taken to make 101 a mandatory prerequisite for 103 & 104** for a better learning outcome: Currently, in Europe, Latin America, and North America, the number of employees who bypass 101 and directly take 103 or 104 far exceeds those who complete 101 beforehand, which limited their overall performance.

Course orders have significant impact on the employee's score improvement (3/3)



- Employees focus solely on the specialized **Course 991** show **less overall improvement** in both **application** and **proficiency scores** compared to those who learned in a structured learning path by **taking two or more courses in sequence**.
- The order** in which courses are taken **clearly matters**, as employees **benefit** more from **progressing through the stages of learning** rather than **focusing solely on specialized courses**.

The course progression should start with foundation courses



The recommended course sequences for the employees is start with foundation courses to have a strong base of essential skills. The employee should take more advanced, intermediate courses based on the initial knowledge. Employees can learn specialized courses to tailor for specific job roles or personal needs roles.

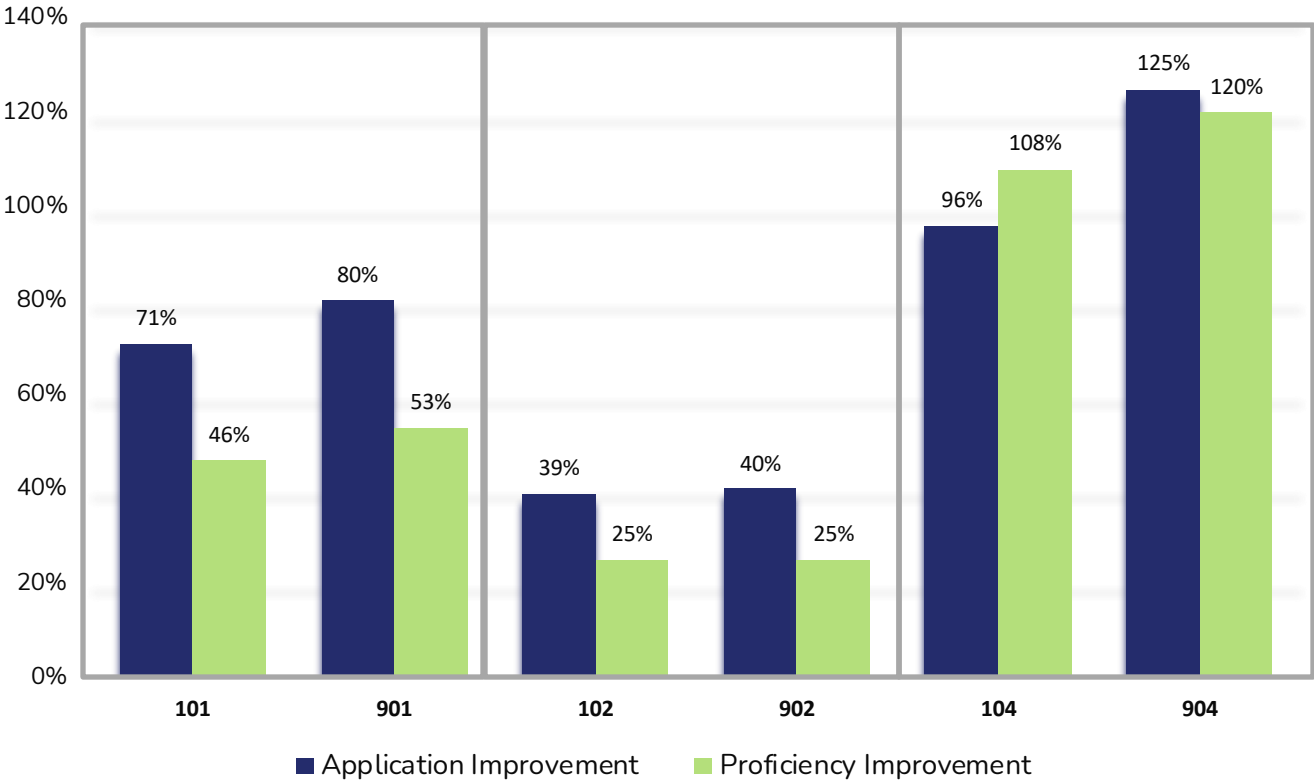
Foundation courses	Advanced courses	Specialize courses
Course 101: Logistics Software Essentials Course 901: Logistics Software Essentials Virtual Course 902: Intro to NERP Virtual Course 102: Intro to NERP	Course 104: Advanced Transportation Management Systems (TMS) Course 103: Advanced Warehouse Management System (WMS) Course 904: Advanced Transportation Management Systems Virtual (TMS)	Course 105: Supply Chain Optimization Strategies Course 991: Automation in Logistics Course 992: Cybersecurity in Supply Chain Management



Comparison of Training Formats: In-person Vs Virtual



Employee Performance of **Virtual** is higher than **In-person** courses



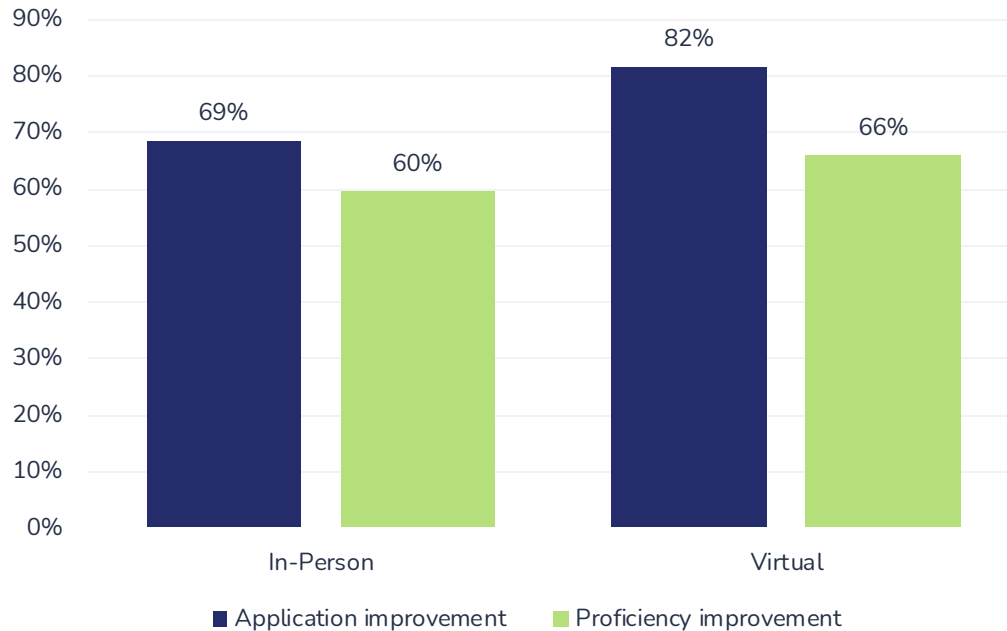
Comparison of performance improvement between in-person and virtual courses

Course Title	In-person	Virtual
Logistics Software Essentials	101	901
Intro to NERP	102	902
Advanced Transportation Management Systems (TMS)	104	904

- The application and proficiency improvement scores for Virtual Courses are greater than that for in-person courses.
- Advanced Transportation Management Systems (TMS) (104,904) where the scores for virtual is significantly higher than for in-person course.

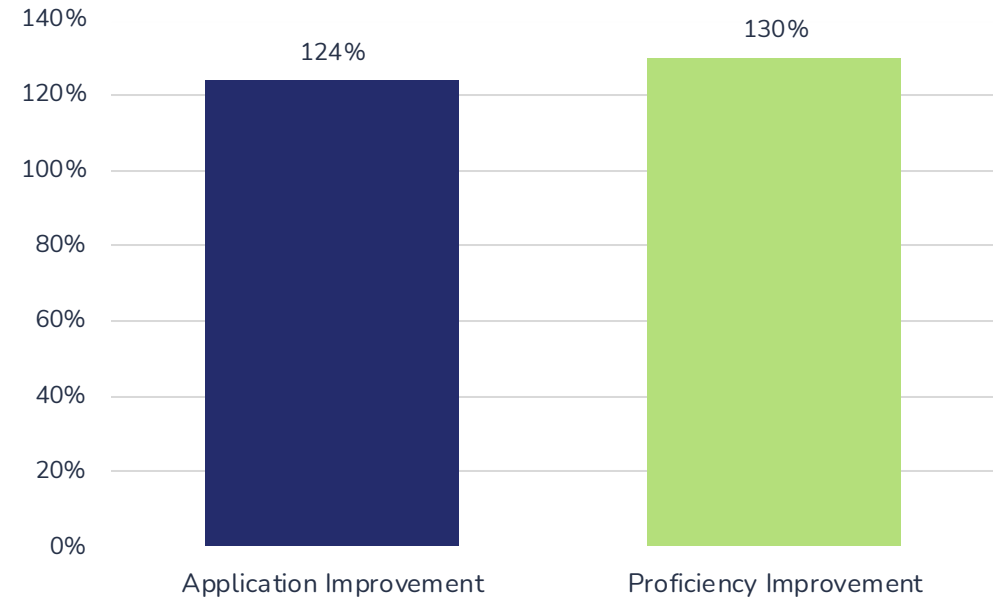


Virtual Format can improve performance and participation



Average score improvement of virtual and in-person courses

- The average performance scores of all the Virtual courses is greater than the In-Person courses.



Score improvement of **103_Advanced Warehouse Management Systems**

- The performance of Course 103 is good in the in-person format.
- Whereas the participation is only 6.4%.
- Virtual format can improve the participation rate and the performance.



Advanced Warehouse Management Systems_103 should be adapted to Virtual Format



Employees can effectively acquire the same level of skills through the virtual format of 103, all while benefiting from greater convenience and flexibility.



Performance Improvement

The performance is not impacted if the employees take the course virtually instead the score is better for virtual than in-person courses



Flexibility

The virtual format gives the employees more flexibility and convenience because they can take the courses anytime from anywhere.



Strategic Actions for Optimizing Training Effectiveness



Performance Trends

- **Recommendation:** Prioritize course improvement over increasing participation rates in courses with lower proficiency and application improvements, such as "Intro to NERP."
- **Rationale:** While participation is important, courses that demonstrate limited impact on employee skills should be enhanced to ensure they contribute more effectively to competency development.

Course Sequence

- **Recommendation:** Mandate foundational courses, such as "Logistics Software Essentials" (Course 101) and "Intro to NERP" (Course 102) as prerequisites for advanced courses like "Advanced TMS" (Course 103) and "Advanced WMS" (Course 104).
- **Rationale:** Employees who complete foundational courses before advancing show significantly better performance outcomes. This structured approach ensures employees are adequately prepared for more complex material.

Training Formats

- **Recommendation:** Adapt the format of the high-performing course, Advanced Warehouse Management Systems (Course 103) into virtual as it might increase both participation and proficiency improvements.
- **Rationale:** Virtual formats offer flexibility and have demonstrated success in improving performance, particularly for courses like Course 904, where virtual learning leads to better outcomes than in-person training.



THANK YOU!