











ORIGINAL

Validation of the integrated progressive internship model syntax in tourism polytechnic

Validación de la sintaxis del modelo integrado de prácticas progresivas en politécnicos turísticos

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ABSTRACT

In the era of globalization, the gap between university graduates' competencies and industry requirements remains a significant challenge. Internship programs often fail to optimally bridge the gap between academic theories and workplace practices. This study aims to validate the development of an integrated progressive internship model designed to enhance the quality of industrial internship programs for students. The model was developed based on the Four D's framework (Define, Design, Develop, Disseminate), with key syntax elements including Coaching Clinic, Input, Process, Evaluation, and Dissemination. Validation was conducted involving 8 experts through Focus Group Discussions (FGDs) and data analysis using Confirmatory Factor Analysis (CFA) based on Structural Equation Modeling. The findings reveal that the model demonstrates high validity and reliability, with R-Square values ranging from 0,938 to 0,939. It can be concluded that this internship model holds significant potential for implementation in reducing the gap between theory and practice while enhancing students' preparedness to meet the demands of the workforce.

Keywords: Syntax; Model Validation; Vocational Education.

RESUMEN

En la era de la globalización, la brecha entre las competencias de los graduados universitarios y los requisitos de la industria sigue siendo un desafío significativo. Los programas de prácticas profesionales a menudo no logran cerrar de manera óptima la brecha entre las teorías académicas y las prácticas laborales. Este estudio tiene como objetivo validar el desarrollo de un modelo progresivo de prácticas integradas diseñado para mejorar la calidad de los programas de prácticas industriales para estudiantes. El modelo se desarrolló basado en el marco de las Cuatro D's (Definir, Diseñar, Desarrollar, Difundir), con elementos clave en su sintaxis que incluyen Coaching Clinic, Entrada, Proceso, Evaluación y Difusión. La validación se realizó con la participación de 8 expertos a través de discusiones en grupos focales (DGFs) y análisis de datos utilizando Análisis Factorial Confirmatorio (AFC) basado en Modelado de Ecuaciones Estructurales. Los resultados revelan que el modelo demuestra una alta validez y fiabilidad, con valores de R-Square que oscilan entre 0,938 y 0,939. Se puede concluir que este modelo de prácticas tiene un potencial significativo para su implementación, ya que contribuye a reducir la brecha entre teoría y práctica, además de mejorar la preparación de los estudiantes para enfrentar las demandas del mercado laboral.

Palabras clave: Sintaxis; Validación de Modelos; Educación Vocacional.

INTRODUCTION

The Merdeka Belajar-Kampus Merdeka (MBKM) program, launched in 2020 by the Directorate General of Higher Education (Dirjen Dikti), Ministry of Education and Culture (Kemendikbud), represents an innovative strategy to enhance the quality of higher education in Indonesia. This initiative aims to provide students with in-depth expertise in their respective fields, enabling them to apply theoretical knowledge effectively in the workforce.^(1,2,3,4,5) By emphasizing flexibility and autonomy in learning, MBKM seeks to create adaptive, open, and student-centered learning environments. This approach fosters the development of creativity, capacity, and independence through immersive practical experiences.⁽⁶⁾ One of the critical components of MBKM is the internship program, which offers students practical work experiences to deepen their expertise in their chosen fields. Internships provide students with opportunities to engage in intensive industry training, enhancing their understanding of job responsibilities and production processes.^(7,8) Beyond technical comprehension, internships help students build relationships with industry professionals, gain insight into workplace culture, boost self-confidence, and improve problem-solving and interpersonal skills.⁽⁹⁾ Moreover, internships act as a bridge between theoretical campus learning and real-world professional demands, preparing students for further education and career advancement.^(10,11) The duration of an internship significantly influences its effectiveness. Research indicates that a six-month internship is optimal, allowing students sufficient time to adapt to the work environment, deepen their technical understanding, and enhance their professional competencies.^(12,13) In contrast, shorter internships often result in superficial experiences, limiting students' opportunities to grasp the complexities of the professional environment.⁽¹⁴⁾

The internship duration should be extended to a minimum of six months to allow students to acquire knowledge that accelerates their adaptation to the work environment.^(15,16) Additionally, soft skills play a crucial role in problem-solving, analytical thinking, decision-making, organization, time management, risk-taking, and communication.⁽¹⁷⁾ These skills also enable students to work independently and develop social and emotional competencies.⁽¹⁸⁾ Moreover, internships significantly enhance students' employability.⁽¹⁹⁾ Therefore, internships are considered a vital and valuable step toward students' success.⁽²⁰⁾

The implementation of the internship program involves a synergistic collaboration between various stakeholders, including universities, industry partners, academic advisors, and industry supervisors. Universities play a key role in designing internship programs that align with market needs, ensuring the quality of the program, and establishing strategic partnerships with industry.⁽²¹⁾ Academic advisors provide strategic support, while industry supervisors offer technical guidance and ensure the smooth execution of the internship program.^(22,23)

To ensure the success of internships, various models have been developed, addressing aspects such as duration, curriculum alignment with industry needs, supervision mechanisms, and feedback-based evaluation.^(24,25) For instance, Chin et al.⁽²⁶⁾ emphasize the importance of reflection, mentoring, and critical thinking development, while Alias et al.⁽²⁷⁾ underline the significance of preparation, implementation, and evaluation stages in internship programs. This article proposes the syntax of the Integrated Progressive Internship Model, which adapts key elements from previous models with several key innovations: 1) Preparation stage: Includes basic skill training, professional ethics orientation, mental health seminars, and internship goal orientation; 2) Implementation stage: Focuses on intensive mentoring by industry supervisors, periodic monitoring, and assigning relevant responsibilities; 3) Evaluation and Dissemination stage: Involves periodic performance-based evaluations, followed by dissemination to enhance students' soft skills.

The syntax of this model is designed to create a comprehensive and structured internship experience, bridging the gap between theory and practice, and preparing students to face the challenges of the professional world. This article aims to validate the syntax of the Integrated Progressive Internship Model to ensure its effective application in student industrial internship programs.

METHOD

This study employs a Research and Development (R&D) model that adopts the Four D's (4D) framework developed by Thiagarajan in 1974.⁽²⁸⁾ The 4D model consists of four main stages: Define, Design, Develop, and Disseminate. During the Develop stage, a Focus Group Discussion (FGD) was conducted to validate the syntax of the Integrated Progressive Internship Model. The FGD involved 8 experts from various fields, including instructional model experts, vocational education experts, evaluators, language specialists, and industry practitioners. This process aimed to evaluate and measure the construct of the developed model.

The validity measurement of the model's syntax was carried out using a questionnaire designed to assess the validation sheet, specifically focusing on the model's syntax. The measurement used a Likert scale, and the data obtained were analyzed using Confirmatory Factor Analysis (CFA)⁽²⁹⁾ with SmartPLS software. The results of the data analysis were used to test the validity of the model's syntax, ensuring that the developed model meets academic standards and can be applied effectively in real-world internship programs.

Table 1. Aspects and Indicators for Validating the Syntax of the Integrated Progressive Internship Model	
Evaluated Aspect	Indicator
Coaching Clinic	<p>Interns are provided with orientation on objectives, rules, policies, and expectations during the internship.</p> <p>Students participate in theoretical learning through classes and seminars to understand relevant basic concepts.</p> <p>Students undergo basic training and are given tasks and projects related to their field of work.</p> <p>Students attend a seminar aimed at preparing them mentally before the internship program begins.</p>
Input	<p>Lecturers provide information about available internship placements</p> <p>Students complete internship documents via an application and submit their applications.</p> <p>Students participate in an interview with the designated hotel, scheduled by the lecturer.</p> <p>Lecturers announce the selection of students accepted for internship placements.</p>
Process	<p>Students carry out the internship program at the assigned location</p> <p>Students record daily activities in a journal as a form of documentation</p> <p>Lecturers and supervisors provide guidance, motivation, and feedback to students.</p> <p>Supervisors report students' progress to the lecturers to ensure optimal process execution</p>
Evaluation	<p>Students perform self-reflection on their activities and outcomes during the internship.</p> <p>Supervisors assess students' performance based on direct observations.</p> <p>Lecturers evaluate the internship reports and compare them with supervisor assessments. This evaluation considers cognitive, affective, and psychomotor aspects of students.</p> <p>Lecturers and supervisors hold discussions to provide feedback to students, aiming to identify strengths and areas for improvement.</p>
Dissemination	<p>Students prepare a presentation covering their experiences, work outcomes, and reflections during the internship to present in front of lecturers and peers.</p> <p>Students present their internship outcomes in a forum scheduled by the lecturer as part of reporting their achievements during the internship program.</p> <p>Students receive questions and feedback from the audience, including lecturers and other students, to enrich their insights regarding their internship experiences.</p> <p>Lecturers provide a final assessment based on the internship report, presentation, and student participation in the discussions during the dissemination session</p>

This table outlines the key aspects and indicators for validating the syntax of the Integrated Progressive Internship Model, which ensures that each phase of the internship process, from preparation to dissemination, is properly structured and aligned with learning objectives.

RESULTS

A Confirmatory Factor Analysis (CFA) was conducted to test the construct validity of the Integrated Progressive Internship Model, which consists of five main syntaxes: Coaching Clinic (CC-MPT), Input (I-MPT), Process (P-MPT), Evaluation (E-MPT), and Dissemination (D-MPT). The analysis used a Covariance-Based Structural Equation Modeling (CB-SEM) approach within SmartPLS 4 software. The CB-SEM analysis results show significant relationships between all the syntaxes of the Integrated Progressive Internship Model. These relationships indicate that each syntax is interrelated and contributes to the overall structure of the model. More detailed results can be found in table 2, which presents the CFA output.

No	Syntax	Indicator	Outer loading	Cronbach's Alpha	Composite Reliability (rho_c)	AVE
1.	Coaching Clinic	CC-MPT1	1,000	0,919	0,922	0,745
		CC-MPT2	1,037			
		CC-MPT3	1,167			
		CC-MPT4	0,837			
2.	Input	I-MPT1	1,000	0,825	0,829	0,552
		I-MPT2	1,148			
		I-MPT3	1,160			
		I-MPT4	1,172			
3.	Process	P-MPT1	1,000	0,856	0,858	0,593
		P-MPT2	1,289			
		P-MPT3	0,931			
		P-MPT4	0,736			
4.	Evaluation	E-MPT1	1,000	0,886	0,829	0,651
		E-MPT2	0,981			
		E-MPT3	0,641			
		E-MPT4	0,630			
5.	Dissemination	D-MPT1	1,000	0,803	0,802	0,520
		D-MPT2	0,959			
		D-MPT3	0,914			
		D-MPT4	0,899			

The CFA results, shown in table 2, reflect diverse psychometric characteristics across the five syntaxes of the Integrated Progressive Internship Model. The outer loading values for the indicators indicate substantial contributions to their latent constructs, with some indicators showing strong loadings above 1,0 (e.g., P-MPT2 = 1,289, I-MPT4 = 1,172, CC-MPT3 = 1,167). However, some indicators, such as E-MPT4 (0,630), E-MPT3 (0,641), and P-MPT4 (0,736), show relatively lower loadings. In terms of reliability, Cronbach's Alpha values range from 0,803 to 0,919, with the highest consistency found in Coaching Clinic (0,919) and the lowest in Dissemination (0,803). Composite Reliability (rho_c) values also demonstrate moderate reliability, ranging from 0,802, with Coaching Clinic having the highest value (0,922) and Dissemination the lowest (0,802).

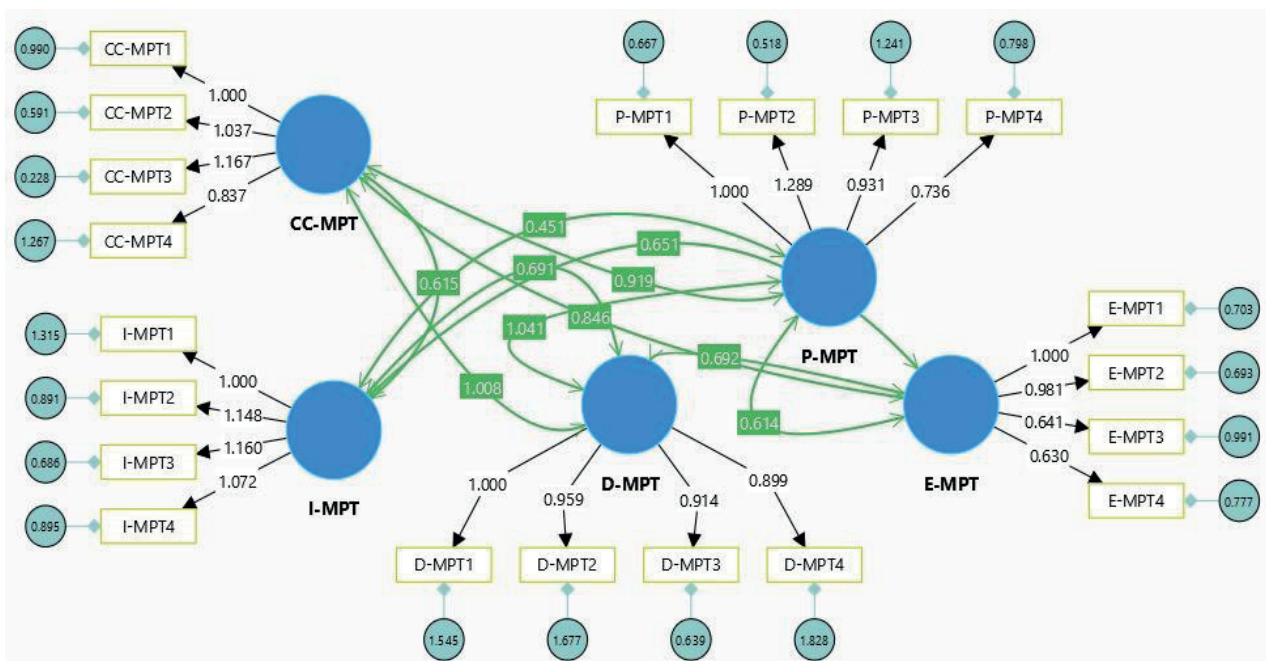


Figure 1. CFA Test Output using CB-SEM Approach

Finally, Average Variance Extracted (AVE) values for all constructs exceed the ideal threshold of 0,5, ranging from 0,520 to 0,745. The Coaching Clinic syntax shows the highest AVE (0,745), while Dissemination has the lowest (0,520). These results confirm that the indicators adequately represent their respective constructs, validating the robustness of the model's syntax. CFA test data using the CB-SEM approach can also be seen in Figure 1.

Based on the results of the Confirmatory Factor Analysis (CFA) using the CB-SEM approach, the Integrated Progressive Internship Model demonstrates a structure where its components are interconnected. The visualization in figure 1 shows a complex network of relationships between the nine learning syntaxes, where each component is linked to others through paths that depict strong associations. Overall, the analysis indicates that the Integrated Progressive Internship Model has a solid structure with strong connections between its syntaxes.

DISCUSSION

This syntax model has been validated through CFA testing using SmartPLS software. The analysis results show that all the syntaxes are correlated within the internship model. These findings suggest that the Integrated Progressive Internship Model developed possesses superior quality in explaining the relationships among the elements and syntaxes designed. This aligns with the view that a product is considered high-quality if it meets content validity and construct validity, reflecting the needs, novelty, consistency among components, and is supported by strong theoretical and empirical foundations.^(30,31,32) Surucu and Maslakci⁽³³⁾ also emphasize that validity, particularly content validity and construct validity, is essential in quantitative research.

Construct validity in the context of the integrated progressive internship model refers to how well the model measures and reflects the intended concept, which is the students' readiness to face the workforce through the integration of practical skills development and theory. McKeown et al.⁽³⁴⁾ further argue that construct validity in internship programs is related to how well the program integrates theoretical knowledge with real-world practice. In this regard, construct validity assesses whether the stages of the internship program, from basic to more complex, truly enhance the skills required by students to meet industry demands. highlight the importance of designing internship programs based on industry needs. The Integrated Progressive Internship Model meets these criteria by ensuring that students have a deep understanding of industry work processes before and during the internship. This validity is reinforced through a collaborative approach between educational institutions and industry partners in designing and implementing the internship program. In conclusion, the validity of the Integrated Progressive Internship Model lies not only in its theoretical design but also in its ability to be consistently applied and yield significant results.

CONCLUSIONS

The validation results indicate that the developed integrated progressive internship model has a strong structure, good validity, and consistent reliability. This model includes five syntaxes that are comprehensively integrated, providing a complete guide from preparation to the dissemination of internship results. Each syntax has relevant indicators that support the achievement of the internship program's objectives. With adequate statistical analysis results, this model is expected to serve as a guide for more effective internship program implementation, minimizing the gap between theory and practice, and improving graduate quality to meet industry needs.

REFERENCES

1. Mariati M. Tantangan Pengembangan Kurikulum Merdeka Belajar Kampus Merdeka di Perguruan Tinggi. *Semin Nas Teknol Edukasi Sos Dan Hum.* 2021 Aug 30;1(1):749-61.
2. Susilawati N. Merdeka Belajar dan Kampus Merdeka Dalam Pandangan Filsafat Pendidikan Humanisme. *J Sikola J Kaji Pendidik Dan Pembelajaran.* 2021 Mar 31;2(3):203-19.
3. Sopiensyah D, Masruroh S. Konsep dan Implementasi Kurikulum MBKM (Merdeka Belajar Kampus Merdeka). *Reslaj Relig Educ Soc Laa Roiba J.* 2021 Aug 11;4(1):34-41.
4. Rosadi A, Suwartane GA, Budilaksono S, Nurzaman F, Dewi EP. Penerapan Model Kegiatan Pembelajaran Magang Mbkm Pada Program Matching Fund Kedaireka. *J Edukasi Dan Multimed.* 2023 Feb 27;1(1):44-52.
5. Baharuddin MR, Muhammad Rusli. Adaptasi Kurikulum Merdeka Belajar Kampus Merdeka (Fokus: Model MBKM Program Studi). *J Studi Guru Dan Pembelajaran.* 2021 Apr 22;4(1):195-205.
6. Siregar N, Sahirah R, Harahap AA. Konsep Kampus Merdeka Belajar di Era Revolusi Industri 4.0. *Fitrah J*

Islam Educ. 2020 Jun 30;1(1):141-57.

7. Zopiatis A. Hospitality internships in Cyprus: a genuine academic experience or a continuing frustration? *Int J Contemp Hosp Manag.* 2007 Feb 13;19(1):65-77.

8. Samidjo S. Efektifitas Pelaksanaan Magang Industri Mahasiswa Program Studi Pendidikan Teknik Mesin. *TAMAN VOKASI.* 2017 Dec 12;2(2):246.

9. Karunaratne K, Perera N. Students' Perception on the Effectiveness of Industrial Internship Programme. *Educ Q Rev [Internet].* 2019 Dec 30 [cited 2024 Dec 10];2(4). Available from: <https://www.asianinstituteofresearch.org/EQRarchives/Students%E2%80%99-Perception-on-the-Effectiveness-of-Industrial-Internship-Programme>

10. Hora MT, Parrott E, Her P. How do students conceptualise the college internship experience? Towards a student-centred approach to designing and implementing internships. *J Educ Work.* 2020 Jan 2;33(1):48-66.

11. Hussien FM, La Lopa M. The determinants of student satisfaction with internship programs in the hospitality industry: A case study in the USA. *J Hum Resour Hosp Tour.* 2018 Oct 2;17(4):502-27.

12. Herawati N. Manajemen Magang Industri Guru Produktif Teknik Komputer dan Jaringan di SMK Negeri Kabupaten Cilacap. *Manaj Pendidik.* 2021 Dec 10;16(2):128-35.

13. P. Maertz Jr C, A. Stoeberl P, Marks J. Building successful internships: lessons from the research for interns, schools, and employers. *Career Dev Int.* 2014 Feb 4;19(1):123-42.

14. Jing Y, Zhang J. The Influence of Short-Term Overseas Internship on English Learners' Self-Efficacy and Intercultural Communication Apprehension. *Engl Lang Teach.* 2019 Aug 6;12(9):6.

15. Gohae AS. Pengalaman Magang, Minat Kerja Dan Pengaruhnya Terhadap Kesiapan Kerja Mahasiswa Akuntansi. *J Ilm Manaj Ekon Akunt MEA.* 2020 Dec 15;4(3):1954-64.

16. Bhakti YB, Simorangkir MRR, Tjalla A, Sutisna A. Kendala Implementasi Kebijakan Merdeka Belajar Kampus Merdeka (Mbkm) Di Perguruan Tinggi. *Res Dev J Educ.* 2022 Sep 14;8(2):783-90.

17. Kenyathulla HB, Ahmad NA, Idris AR. Gaps between competence and importance of employability skills: evidence from Malaysia. *High Educ Eval Dev.* 2019 Jan 1;13(2):97-112.

18. Chu SKW. *Social Media Tools in Experiential Internship Learning [Internet].* Singapore: Springer Singapore; 2020 [cited 2024 Dec 10]. Available from: <http://link.springer.com/10.1007/978-981-15-1560-6>

19. Kapareliotis I, Voutsina K, Patsiotis A. Internship and employability prospects: assessing student's work readiness. *High Educ Ski Work-Based Learn.* 2019 Jan 1;9(4):538-49.

20. Thompson MN, Perez-Chavez J, Fetter A. Internship Experiences Among College Students Attending an HBC: A Longitudinal Grounded Theory Exploration. *J Career Assess.* 2021 Nov;29(4):589-607.

21. Arisandi D, Widya Mutiara M, Christanti Mawardi V. Dampak Kegiatan Merdeka Belajar Kampus Merdeka (Mbkm) Magang Dan Studi Independen Dalam Meningkatkan Kompetensi Mahasiswa. *J Muara Ilmu Sos Hum Dan Seni.* 2022 Apr 30;6(1):174.

22. Rezki Amalia, Anuar AB, Fahmi A. Merdeka Belajar Kampus Merdeka (MBKM): Efektifitas Pelaksanaan Magang Mahasiswa Bimbingan dan Konseling Dengan Menggunakan Metode CIPP. *G-Couns J Bimbing Dan Konseling.* 2023 Apr 3;7(02):239-51.

23. Setyorini D, Lestari B, Purwanto P, Winarno W, Sagoro EM. Model Magang Industri Guna Pencapaian Standar Kompetensi Lulusan Fakultas Ekonomi Universitas Negeri Yogyakarta. *J Pendidik Akunt Indones [Internet].* 2017 Feb 5 [cited 2024 Dec 10];14(2). Available from: <https://journal.uny.ac.id/index.php/jpakun/article/view/12868>

24. Hasanudin M, Budiyo I, Asrori M. Model Development of Accounting Internship Efforts in Dealing

Industrial Revolution 4.0. *Din Pendidik*. 2019 Dec 17;14(2):155-67.

25. Benavides AD, Dicke LA, Holt AC. Internships Adrift? Anchoring Internship Programs in Collaboration. *J Public Aff Educ*. 2013 Jun;19(2):325-53.

26. Chin D, Phillips Y, Teng WM, Clemans A, Kiaw YP. Key Components That Contribute To Professional Identity Development In Internships For Singapore's Tertiary Institutions: A Systematic Review. 2020;10(1).

27. Alias M, Herminarto S, Triyono MB. Designing Industrial Internship Model to Improve the Skills of Prospective Vocational Teachers. 2020;12(1).

28. Thiagarajan S, Others A. Instructional Development for Training Teachers of Exceptional Children: A Sourcebook [Internet]. Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091 (Single Copy, \$5; 1974 [cited 2024 Dec 10]. Available from: <https://eric.ed.gov/?id=ED090725>

29. Creswell JW. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Pearson; 2012. 650 p.

31. Mendoza Velazco DJ, Cejas Martinez MF, Flor Mora OP, Palacios-Trujillo E. Interaction between Research and Innovation in the Ecology of Knowledge in University Organizations: A Correlational Descriptive Study at the National University of Chimborazo, Ecuador. *Salud, Ciencia y Tecnología*. 2024; 4:1309.

32. Barba-Miranda LC, Gómez-Rivero JO. Reflection and pedagogical contextualization in the development of innovative educational practices. *Salud, Ciencia y Tecnología*. 2024;4:896.

33. Sürücü L, Maslakçı A. Validity And Reliability In Quantitative Research. *Bus Manag Stud Int J*. 2020 Sep 25;8(3):2694-726.

34. McKeown MG, Crosson AC, Moore DW, Beck IL. Word Knowledge and Comprehension Effects of an Academic Vocabulary Intervention for Middle School Students. *Am Educ Res J*. 2018 Jun;55(3):572-616.

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The authors declare that there is no conflict of interest.

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