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Development and Evaluation of a PATHFIT Info Card Instructional Prototype for Enhancing Teaching and Learning in Physical Activities Towards Health and Fitness (PATHFIT) 1 Course

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ABSTRACT

This research and development project designed, developed, and evaluated a PATHFIT Info Card instructional prototype intended to enhance teaching and learning in the Physical Activities Towards Health and Fitness (PATHFIT) 1 course. The prototype was conceptualized as a compact, foldable, infographic-based instructional material that consolidates course orientation, fitness concepts, movement principles, kinesiology, training principles, nutrition guides, performance rubrics, injury-response reminders, goal-setting templates, and QR-linked supplementary resources. The study used a development-and-evaluation approach anchored on instructional design, multimedia learning, and constructivist principles. The prototype was evaluated by selected Physical Education faculty experts using face validity, quality checking, and structured feedback focusing on content quality and accuracy, clarity and organization, visual design and infographic quality, pedagogical effectiveness, usability and functionality, alignment with learning objectives, and overall face validity. Results showed that the PATHFIT Info Card obtained consistently high expert ratings, with most domains interpreted as Very Good and the domains on pedagogical effectiveness and face validity interpreted as Excellent. Validators affirmed that the material was accurate, relevant, visually engaging, portable, easy to use, aligned with PATHFIT competencies, and useful as a teaching aid and student reference. The study concludes that the PATHFIT Info Card is a highly acceptable instructional innovation that can support student-centered learning, instructional clarity, engagement, and quick-reference learning in PATHFIT education. Recommendations emphasize pilot classroom implementation, student-based evaluation, revision through wider expert review, and possible adaptation for other Physical Education courses.

Keywords: *PATHFIT, instructional prototype, info card, Physical Education, infographic learning, instructional material evaluation*

INTRODUCTION

Instructional innovation has become increasingly important in contemporary higher education, particularly in courses where learners must understand concepts, demonstrate skills, and apply knowledge in real-life settings. In Physical Activities Towards Health and Fitness (PATHFIT), students are expected to develop

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Volume 2 Issue 5 (May 2026)

movement competence, health-oriented behaviors, and lifelong wellness practices. However, the delivery of PATHFIT content may become challenging when students need to remember multiple concepts, routines, safety principles, fitness terminology, and assessment expectations within limited class time.

The PATHFIT program aims to equip students with knowledge, skills, and attitudes for active and healthy living. Despite this goal, traditional delivery may limit students' opportunity to review essential information during performance-based activities. In this context, compact and visually engaging learning materials may help students access key concepts quickly and may help teachers streamline instruction without reducing practical movement time. To respond to this instructional need, this study developed the PATHFIT Info Card as a foldable, portable, and infographic-based instructional prototype. The material was designed to function as a quick-reference guide for students and a supplementary teaching tool for instructors. It integrates concise text, visual icons, movement illustrations, performance rubrics, QR codes, and practical learning templates to support comprehension, retention, and application of PATHFIT concepts.

The study specifically sought to develop a compact and foldable PATHFIT Info Card; integrate its content with PATHFIT instructional delivery; enhance students' comprehension, motivation, and practical application through visual learning; provide teachers with a quick-reference instructional tool; and assess the prototype's effectiveness in enhancing content knowledge and pedagogy through expert-based evaluation, face validity measures, quality checking, and structured feedback.

Literature Review

Instructional Design and Functionality

Instructional design emphasizes the alignment of content, learner needs, activities, and assessment. Well-designed instructional materials help organize complex information and support efficient teaching delivery. Jenkins et al. (2019) emphasized that concise and well-structured instructional materials improve teaching practices by guiding instructors in presenting key content clearly. Similarly, Bate and Roberts (2019) argued that instructional innovations with clear visual structures and interactive design increase accessibility and practicality in classroom use.

In PATHFIT instruction, functionality is important because students must move between concept learning and physical performance. A portable and foldable reference tool can support this transition by giving learners immediate access to essential information while allowing teachers to dedicate more class time to skill practice and feedback.

Visual Aids and Student Engagement

Visual aids can make abstract or procedural information easier to understand. Chen et al. (2020) reported that visual materials improve comprehension and engagement because they help learners connect concepts with concrete representations. Felder and Brent (2016) likewise emphasized that visual instructional support is helpful in teaching complex topics in applied and performance-based fields. For Physical Education, diagrams, icons, and illustrations can guide students in understanding movement mechanics, exercise principles, and safety procedures.

The use of foldable guides, info cards, and similar portable visual materials also supports independent learning. Krause et al. (2021) found that portable visual aids can increase learners' confidence in performing health-related tasks because they provide accessible reminders during practice. These findings support the development of the PATHFIT Info Card as an instructional material that combines visual structure, portability, and practical learning support.

Evaluation of Instructional Effectiveness

Instructional materials must be evaluated to determine whether they are accurate, clear, aligned, and useful for teaching and learning. Hsu and Lee (2022) emphasized that systematic evaluation improves the quality and effectiveness of instructional materials. Peterson et al. (2023) similarly stressed the value of expert review in ensuring that learning resources are aligned with educational standards and teaching objectives.

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 5 (May 2026)

Face validity is an important initial evaluation procedure in instructional material development. Gonzales and Ramirez (2021) explained that face validity determines whether a material appears appropriate, credible, and useful for its intended instructional purpose. In the present study, expert-based validation was used to assess the PATHFIT Info Card's content quality, clarity, visual design, pedagogical effectiveness, usability, alignment, and overall impression.

METHODS

Research Design

This study used a research-and-development approach with expert-based evaluation. The project followed systematic phases of research and conceptualization, design, material selection, prototype production, testing and evaluation, refinement, and finalization. The method was appropriate because the study aimed not only to describe an instructional issue but also to produce and evaluate a usable instructional prototype for PATHFIT 1.

Research Locale

The prototype was developed for PATHFIT instruction within the context of tertiary Physical Education. The institutional identity and content design were aligned with the Physical Education setting and the PATHFIT 1 course structure. Evaluation was conducted with selected Physical Education faculty experts who were knowledgeable in content delivery, pedagogy, and instructional material development.

Participants and Sampling Technique

The validators were selected Physical Education faculty experts who reviewed the PATHFIT Info Card. Expert selection was based on relevance to Physical Education instruction and familiarity with PATHFIT competencies, course outcomes, and classroom implementation. Participation was voluntary, and responses were reported in aggregate form.

Research Instrument

The study used an expert evaluation instrument designed to measure the instructional quality of the PATHFIT Info Card. The evaluation criteria covered content quality and accuracy, clarity and organization, visual design and infographic quality, pedagogical effectiveness, usability and functionality, alignment with learning objectives, and face validity or overall impression. A five-point scale was used: 5 for Excellent, 4 for Very Good, 3 for Good, 2 for Fair, and 1 for Needs Improvement. Validators also provided qualitative comments and recommendations.

Prototype Development Procedure

The development process began with a review of instructional materials, infographic-based learning resources, and PATHFIT learning needs. The concept was then translated into a modular, back-to-back, foldable info card that functions as a microlearning booklet. The front side presented weekly course content and core PATHFIT topics, while the back side contained reference materials such as fitness myths, injury response, movement dictionary, rubrics, goal-setting guide, and teacher's guide. Glossy brochure paper, double-sided printing, full-color digital printing, icons, diagrams, and QR-code integration were selected to improve durability, readability, portability, and learner engagement.

Data Gathering Procedure

Selected validators examined the prototype and rated it using the structured evaluation instrument. The review focused on the accuracy, organization, visual appeal, instructional usefulness, usability, alignment, and overall impression of the PATHFIT Info Card. Written comments and suggestions were also collected. The feedback was analyzed and used to refine the final version of the instructional material.

ISSN: 3116-3475
International Journal
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Data Analysis

Quantitative ratings were summarized using mean scores and verbal interpretations. Qualitative comments were synthesized thematically to identify strengths and areas for improvement. The evaluation results guided prototype refinement in terms of content accuracy, spacing, visual hierarchy, language clarity, instructional flow, and overall design consistency.

Ethical Consideration

The study observed voluntary participation, informed consent, confidentiality, transparency, and responsible data handling. Validators were informed of the academic purpose of the study, the nature of their participation, the type of data collected, their right to withdraw, and the confidentiality of their responses. Personal information was protected through coding and secure data handling in accordance with the Data Privacy Act of 2012.

RESULTS AND DISCUSSION

Development of the PATHFIT Info Card Prototype

The developed PATHFIT Info Card was designed as a dual-purpose instructional tool: a quick-reference guide for teachers and an accessible learning aid for students. Its foldable, infographic-heavy layout condensed key PATHFIT concepts into organized panels that support blended learning, fitness planning, movement instruction, assessment preparation, and independent review.

Table 1. *Major Functional Sections of the PATHFIT Info Card*

Component	Content/Function
Course Orientation	PATHFIT 1 title, university identity, course description, learning outcomes, and course requirements
Core Fitness Concepts	Physical fitness, health-related and skill-related components, F.I.T.T. principles, overload, progression, specificity, and movement competency screening
Movement and Kinesiology	Planes of motion, joint movements, locomotor and non-locomotor skills, core stability, and resistance training guides
Health and Safety	PAR-Q readiness, warm-up and cool-down reminders, injury-response P.R.I.C.E. protocol, and fitness myths debunked
Nutrition and Self-Monitoring	Macronutrient guide, Pinggang Pinoy, food log activity, personal fitness planning, and SMART goal framework
Assessment and Teaching Support	Performance rubrics, final exam essentials, movement dictionary, teacher's guide, and QR-linked supplementary resources

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 5 (May 2026)

Figure 1. *PATHFIT 1 Info Card front-side panels and instructional content.*

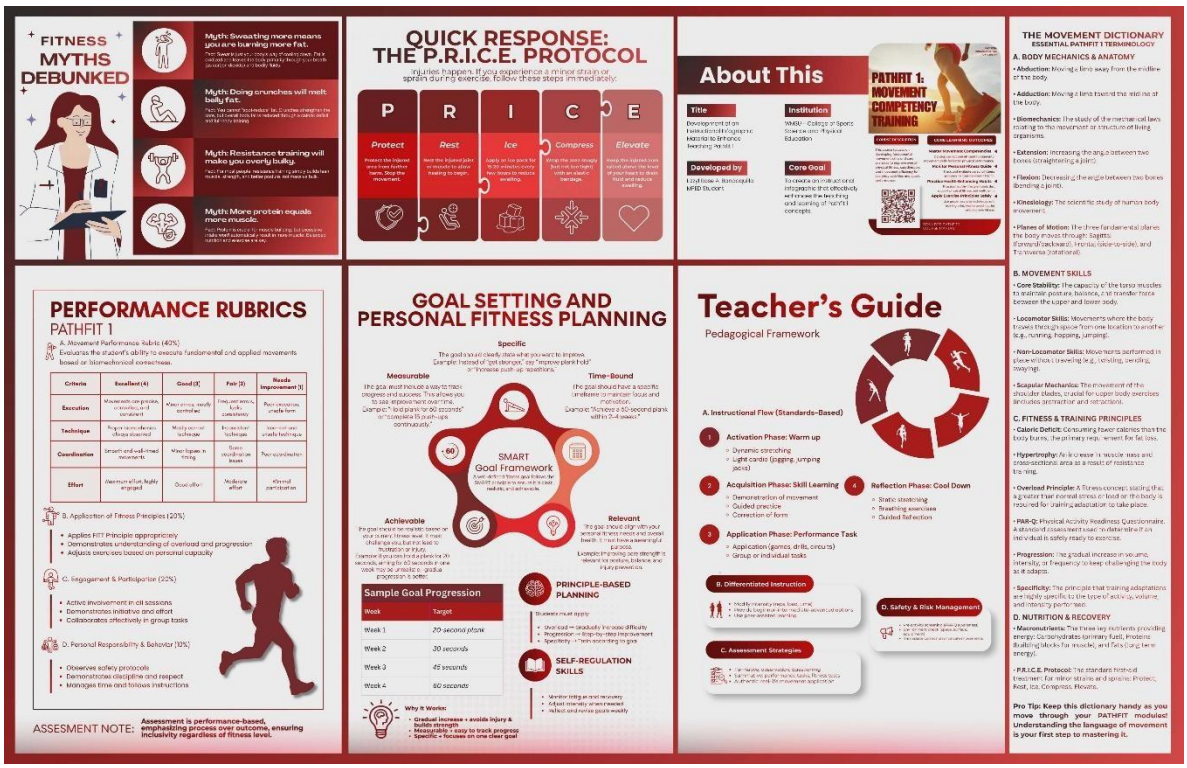

Figure 2. *PATHFIT 1 Info Card back-side panels, rubrics, goal-setting tools, and teacher's guide.*

ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 5 (May 2026)

Material Specifications and Physical Design

The prototype used glossy brochure paper with double-sided full-color digital printing. This material was selected because it balances visual quality, foldability, durability, and cost-effectiveness. The accordion-style layout allows the material to expand into a complete instructional guide and fold into a compact reference tool. Color blocks, borders, icons, diagrams, and photographic models were used to improve organization and recall.

Table 2. *Material and Design Specifications*

Specification	Instructional Function
Glossy brochure paper	Lightweight, durable, and foldable material for multi-panel use
Double-sided full-color printing	Improves image clarity, readability, and visual appeal
Infographics and images	Simplifies complex concepts and supports visual learning
Accordion-style layout	Allows portability and organized weekly content presentation
QR-code integration	Links printed content to supplementary digital resources
WMSU-inspired color scheme	Maintains visual coherence and institutional identity

Comparison Table

Table 3. *Prototype dimension comparison used in refining the foldable design.*

Paper Size	Initial Dimensions	Folded Dimensions	Width Ration	Height Ratio
Original	24 in x 16 in	7 in x 3 in	3.43x	5.33x
New	28 in x 18 in	8.17 in x 3.38 in	3.43x	5.33x

Expert Evaluation of the PATHFIT Info Card

The evaluation results showed that the PATHFIT Info Card obtained consistently high ratings across all evaluation areas. Content quality and accuracy, clarity and organization, visual design, usability, and alignment with learning objectives were interpreted as Very Good. Pedagogical effectiveness and face validity received Excellent ratings, indicating that the validators considered the prototype highly useful for instructional delivery and appropriate for PATHFIT teaching and learning.

Table 4. *Summary of Expert-Based Evaluation Results*

Evaluation Domain	Mean	Interpretation	Discussion
Content Quality and Accuracy	4.20	Very Good	Information was accurate, relevant, concise, and aligned with Physical Education principles and PATHFIT competencies.
Clarity and Organization	4.40	Very Good	Ideas were clearly presented, logically organized, and suitable for learners.
Visual Design and Infographic Quality	4.20	Very Good	Layout, colors, icons, graphics, and readability supported learning engagement.
Pedagogical Effectiveness	5.00	Excellent	Material strongly supported student understanding, engagement, student-centered learning, and teaching efficiency.
Usability and Functionality	4.40	Very Good	The material was portable, easy to use, convenient, and suitable for classroom and independent learning.

ISSN: 3116-3475
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Volume 2 Issue 5 (May 2026)

Aligment with Learning Objectives	4.40	Very Good	Content sequencing and learning activities supported PATHFIT outcomes and competencies.
Face Validity/Overall Impression	5.00	Excellent	The prototype appeared professional, academically acceptable, and appropriate for instructional use.

Interpretation of the Evaluation Findings

The validators' ratings demonstrate that the PATHFIT Info Card is both instructionally useful and visually acceptable. In terms of content quality, the material was judged accurate, relevant, concise, and consistent with current Physical Education principles. This confirms that the prototype can support the delivery of PATHFIT content without replacing teacher instruction or practical demonstrations.

The high rating for clarity and organization suggests that the information was presented in a manner that learners can understand and use. This is important in PATHFIT because students need to connect conceptual information with actual movement performance. The visual design ratings further show that the use of infographics, icons, images, and color blocks contributed to readability and engagement.

Pedagogical effectiveness received the highest evaluation. This indicates that the prototype has strong potential to support student understanding, promote engagement, and help instructors deliver content efficiently. The result is consistent with multimedia learning principles, which hold that learners understand information more effectively when words and visuals are meaningfully combined (Mayer, 2009; Clark & Mayer, 2016). It also supports constructivist learning because the material encourages active learning, self-monitoring, goal-setting, and practical application.

The ratings for usability and functionality confirm the practicality of the foldable format. Because the Info Card can be used for quick reference, classroom support, independent review, and QR-linked extension activities, it strengthens students' access to essential course content. The alignment results also confirm that the prototype supports PATHFIT competencies and course outcomes. Overall, the expert evaluation suggests that the PATHFIT Info Card is a promising instructional innovation for tertiary Physical Education.

CONCLUSION

The PATHFIT Info Card was developed as a compact, foldable, infographic-based instructional prototype designed to enhance teaching and learning in PATHFIT 1. The material consolidated essential course concepts, movement guides, fitness principles, nutrition reminders, assessment tools, goal-setting activities, and teacher support features into an accessible and visually engaging format.

Based on expert evaluation, the prototype was found to be highly acceptable and effective as a supplementary instructional material. It demonstrated strong content quality, clarity, visual design, usability, alignment with learning objectives, pedagogical value, and face validity. The findings indicate that concise and visually organized materials can improve instructional clarity, learner engagement, content accessibility, and teaching efficiency in Physical Education.

The results support the use of multimedia and constructivist approaches in PATHFIT instruction. The PATHFIT Info Card does not replace teacher facilitation or physical demonstration; rather, it complements these core instructional practices by providing a quick-reference, student-centered learning support tool.

Recommendations

1. Physical Education instructors may integrate the PATHFIT Info Card as a supplementary teaching and learning tool during PATHFIT 1 classes, particularly during concept introduction, movement explanation, performance preparation, and review activities.
2. A pilot classroom implementation should be conducted to determine the material's actual effect on students' comprehension, engagement, motivation, knowledge retention, and practical performance.

3. Future evaluations should include student users in addition to faculty experts so that learner perceptions, usability experiences, and performance outcomes can be assessed.
4. The prototype may be revised further based on wider expert validation, student feedback, and classroom observation, particularly in relation to spacing, readability, QR-code content, and topic sequencing.
5. Similar instructional cards may be developed for other PATHFIT courses and Physical Education topics to support modular, student-centered, and visually guided learning.
6. Institutions may consider supporting the production of low-cost, portable, and infographic-based learning materials as part of instructional innovation initiatives in higher education.

References

Austria, R. A., & Rayos, R. R. (2019). Effectiveness of infographics as learning tools in Physical Education. International Journal of Advanced Research and Publications, 3(6), 1–5.

Bate, F., & Roberts, L. (2019). Instructional innovation and interactive design in teaching materials. Journal of Educational Design, 12(2), 45–58.

Chen, Y., Liu, C., & Chang, R. (2020). Visual learning materials and student engagement in physical education instruction. Journal of Physical Education and Learning, 8(1), 22–34.

Clark, R. C., & Mayer, R. E. (2016). E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning (4th ed.). Wiley.

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approach (5th ed.). SAGE Publications.

Felder, R. M., & Brent, R. (2016). Teaching and learning STEM: A practical guide. Jossey-Bass.

Gonzales, M., & Ramirez, A. (2021). Face validity and expert review in instructional material development. Philippine Journal of Educational Innovation, 7(2), 60–72.

Hsu, C., & Lee, M. (2022). Systematic evaluation of instructional materials for effective teaching and learning. International Journal of Instructional Development, 15(3), 101–117.

Jenkins, H., Morgan, P., & Tyler, R. (2019). Concise instructional resources and teaching practice improvement. Journal of Curriculum Materials, 10(4), 88–103.

Krause, J., Smith, R., & Palmer, D. (2021). Portable visual aids and learner confidence in health-related skill performance. Journal of Health and Physical Education, 13(1), 34–46.

Mayer, R. E. (2009). Multimedia learning (2nd ed.). Cambridge University Press.

McCrudden, M. T., & Rapp, D. N. (2017). How visual displays affect cognitive processing. Educational Psychology Review, 29(3), 477–511. https://doi.org/10.1007/s10648-016-9396-5

Peterson, J., Alvarez, L., & Kim, S. (2023). Quality checking and expert review of instructional materials in higher education. Journal of Teaching and Learning Resources, 6(2), 75–90.

Republic Act No. 10173, Data Privacy Act of 2012. (2012). National Privacy Commission.https://www.privacy.gov.ph/data-privacy-act/

Velasco, E. F. (2023). Infographics in education: Impact on memory retention and conceptual understanding. International Journal of Educational Technology and Innovation, 5(1), 56–66.

Velez, L. (2023). Explicit instruction in fitness exercise for PATHFit II (Physical Activities Towards Health and Fitness). Indonesian Journal of Research in Physical Education, Sport, and Health, 1(2), 54–65. https://doi.org/10.26555/ijrpesh.v1i2.423