



TẠP CHÍ  
**KHOA HỌC**  
TRƯỜNG ĐẠI HỌC PHAN THIẾT

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# TÔN CHỈ & MỤC ĐÍCH

Căn cứ vào Quyết định số 275 /GP-BTTTT của Bộ trưởng Bộ Thông tin và Truyền thông ký ngày 04/08/2023 về việc cấp Giấy phép hoạt động báo chí in và tạp chí điện tử cho Tạp chí Khoa học trường Đại học Phan Thiết.

Tạp chí Khoa học Trường Đại học Phan Thiết được xuất bản số đầu tiên vào tháng 12 năm 2023, phát hành theo quý (tháng 3, 6, 9, 12) hàng năm, định kỳ vào ngày 20 tháng cuối quý.

Tạp chí được xây dựng theo các tiêu chí của một tạp chí khoa học. Bài viết được bình duyệt bởi các chuyên gia có uy tín học thuật trong vòng 20 ngày kể từ khi văn phòng Tạp chí nhận bài.

Mục tiêu của Tạp chí là góp phần nâng cao năng lực nghiên cứu của các chuyên gia, các nhà quản lý và giảng viên của Trường Đại học Phan Thiết; công bố và phổ biến các kết quả nghiên cứu khoa học trong và ngoài nước. Phạm vi nghiên cứu của Tạp chí bao gồm các vấn đề về lý thuyết và thực tiễn trong các lĩnh vực kinh tế, xã hội, khoa học tự nhiên, kỹ thuật - công nghệ và khoa học sức khỏe.

Tạp chí Khoa học Trường Đại học Phan Thiết hợp tác liên kết với các tổ chức, cá nhân trong và ngoài nước về các lĩnh vực: phản biện, viết bài, trao đổi học thuật, trợ giúp kỹ thuật và phát hành.

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# Thư Ngỏ

**K**ính gửi Quý nhà khoa học, Chuyên gia, Tác giả và Quý độc giả,  
Trước hết, Trường Đại học Phan Thiết xin gửi lời chúc sức khỏe và lời cảm ơn chân thành đến Quý vị.

Dựa trên Quyết định số 275/GP-BTTTT do Bộ trưởng Bộ Thông tin và Truyền thông ký ngày 04/08/2023, Trường Đại học Phan Thiết xin hân hạnh giới thiệu Tạp chí Khoa học Trường Đại học Phan Thiết (the University of Phan Thiet Journal of Science - UPTJS). Tạp chí là nơi đăng tải những công trình nghiên cứu bằng tiếng Việt và tiếng Anh chưa được công bố trên các ấn phẩm khác.

Tạp chí UPTJS (p-ISSN 3030-444X and e-ISSN 3030-4105) tiếp nhận đa dạng các bài viết, bao gồm bài báo khoa học (scientific papers), bài nghiên cứu ngắn (research letters), bài thông tin ngắn (short communications) và bài tổng quan (perspective reviews) về các lĩnh vực liên quan đến kinh tế, xã hội, khoa học tự nhiên, kỹ thuật-công nghệ và khoa học sức khỏe.

Các bài viết đều được tuyển chọn bởi Hội đồng Biên tập là các chuyên gia cũng như các nhà nghiên cứu hàng đầu, trải qua quá trình bình duyệt kỹ lưỡng bằng cách gửi đến các chuyên gia phản biện uy tín trong lĩnh vực tương ứng để đảm bảo chất lượng các bài viết được đăng trên Tạp chí. Nhằm khuyến khích việc chia sẻ các công trình nghiên cứu của các nhà khoa học, Tạp chí không thu bất cứ khoản phí nào đối với các tác giả có bài được chấp nhận đăng.

Tạp chí rất mong tiếp tục nhận được bài viết cho số Tập 3 - Số 4 (dự kiến phát hành vào ngày 20/12/2025) và các số Tạp chí tiếp theo. Thể lệ viết bài được quy định trong mẫu bài viết (cả tiếng Việt và tiếng Anh). Quý vị có thể tham khảo trên trang web: <https://tapchikhoahocupt.vn/>.

Chúng tôi mong đợi đón nhận được sự đóng góp và hỗ trợ từ Quý vị để nâng cao chất lượng và uy tín của Tạp chí Khoa học Trường Đại học Phan Thiết. Mọi ý kiến đóng góp, vui lòng gửi về Ban Biên tập.

Trân trọng!

Hiệu trưởng



PGS. TS. Võ Khắc Thường



# Call For Papers

Dear Researchers and Scholars,  
First, University of Phan Thiet would like to send our best wishes and sincere thanks to you all.

We are pleased to introduce the University of Phan Thiet Journal of Science (UPTJS) in accordance with Decision No. 275/GP-BTTTT, which the Minister of Information and Communications signed on August 4, 2023. UPTJS (p-ISSN 3030-444X and e-ISSN 3030-4105) was established with the aim of being a platform for publishing valuable scientific research in both Vietnamese and English that has not been published elsewhere.

UPTJS accepts a variety of articles, including scientific papers, research letters, short communications, and reviews in areas related to economics, social sciences, natural sciences, engineering and technology, and health sciences. All articles are selected for publication by the Editorial Board, which consists of experts and leading researchers after undergoing a rigorous peer-review process with reputable reviewers in the corresponding field to ensure the quality of the articles published in UPTJS. To encourage the sharing of research works by scientists, the Journal does not charge any fees for authors whose papers are approved for publication.

The Journal looks forward to receiving submissions for Volume 3 - Issue 4 (expected to be published on December 20, 2025), and subsequent issues.

Policies as well as rules for article presentation are specified in the article template (both in Vietnamese and English) and can be accessed on the website: <https://tapchikhoahocupt.vn/>.

We look forward to receiving your contributions and support to enhance the quality and reputation of UPTJS. For any comments or suggestions, please send them to the Editorial Board of UPTJS.

Best regards,

Rector



Assoc. Prof. Dr. Vo Khắc Thuong



# KHẢO SÁT HOẠT TÍNH KHÁNG VI KHUẨN *CUTIBACTERIUM ACNES* CỦA BỘT NGHỆ LÊN MEN BỞI *LACTOBACILLUS SPP.*

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**Tóm tắt:** Công nghệ lên men bột nghệ vàng (BNV) bằng các vi sinh vật như *Lactobacillus spp.* trong điều trị các vấn đề da liễu, đặc biệt là liên quan đến vi khuẩn *Cutibacterium acnes* là một hướng nghiên cứu đầy tiềm năng. Mục tiêu của nghiên cứu này nhằm sàng lọc hoạt tính kháng *C. acnes* của BNV không và có lên men bởi các loài *Lactobacillus spp.* riêng lẻ. BNV ban đầu được ủ với enzyme pectinase trong 1 giờ, 3 giờ, 5 giờ, sau đó lên men riêng lẻ 0,1%, 0,5%, 1,0%, 2,0%, 3,0% *Lactobacillus reuteri*, *Lactobacillus plantarum*, *Lactobacillus casei* trong 24 giờ, 48 giờ, 72 giờ. Các mẫu BNV được chiết cao còn 96,0% bằng phương pháp ngâm lạnh kết hợp siêu âm, đánh giá hoạt tính kháng khuẩn *C. acnes*. Kết quả cho thấy so với BNV ban đầu, BNV được ủ với enzyme pectinase 30.000 U/g trong đệm acetate pH 5,0, 50 °C, 1 giờ, lên men với 3,0% *L. casei* trong 48 giờ cho hoạt tính kháng *C.acnes* tốt hơn với nồng độ ức chế tối thiểu (MIC = 32 µg/mL) giảm 32 lần. Như vậy, hoạt tính kháng *C. acnes* đã được cải thiện đáng kể sau khi lên men bởi *Lactobacillus spp.*, đặc biệt là 3,0% *L. casei* trong 48 giờ.

**Từ khóa:** bột nghệ vàng, *Curcuma longa*, *Cutibacterium acnes*, hoạt tính kháng khuẩn, *Lactobacillus*, lên men bán rắn

## 1. GIỚI THIỆU

Nghệ vàng (*Curcuma longa L.*) thuộc họ Gừng, phổ biến ở các vùng khí hậu nhiệt đới ẩm như Đông Nam Á và Nam Á, trong đó có Việt Nam. Nghệ vàng chứa nhiều hợp chất chuyển hóa thứ cấp, đặc biệt là curcuminoid, có tác dụng kháng ung thư, kháng khuẩn, kháng viêm, chống oxy hóa, và bảo vệ gan, thần kinh (Đỗ Huy Bích và cộng sự, 2006; Meng và cộng sự, 2018). *Lactobacillus spp.* là một chi vi khuẩn gram dương, hình que, không sinh bào tử, ưa acid, kỵ khí tùy ý (Kumar và Kumar, 2014). Theo phân loại mới nhất, nhóm vi khuẩn acid lactic bao gồm 40 chi, nhưng chỉ có 12 chi được áp dụng trong các quá trình lên men thực phẩm, trong đó, *Lactobacillus* là chi được sử dụng phổ biến nhất để lên men trái cây và rau quả (Szutowska, 2020). Trong quá trình lên men, vi khuẩn acid lactic kết hợp một số đặc tính như probiotic (Quinto và cộng sự, 2014), tăng hàm lượng dinh

dưỡng bằng cách chuyển đổi nồng độ đường (Septembre-Malaterre và cộng sự, 2018), tăng cường sinh khả dụng của các chất dinh dưỡng (Filannino và cộng sự, 2015), hoạt tính kháng khuẩn (Šušćković và cộng sự, 2010) và chống oxy hóa (Rodríguez và cộng sự, 2009), sinh tổng hợp vitamin, phân hủy các độc tố (Swain và cộng sự, 2014) và tăng tính cảm quan. Năm 2019, nghiên cứu của Yong và cộng sự (2019) cho thấy bột nghệ lên men bằng *L. plantarum* có tác dụng kháng viêm, và hàm lượng curcumin tăng lên  $6,26 \pm 0,95\%$ , ngoài ra độc tính tế bào trong nghệ cũng giảm bớt so với mẫu nghệ chưa lên men. Nghiên cứu gần đây nhất của Lin và cộng sự (2024), cho kết quả nghệ lên men bởi 2,0% *L. paracasei* làm giảm nồng độ curcuminoid, tuy nhiên thông qua quá trình chuyển hóa của *L. paracasei* thì sinh khả dụng của curcuminoid có thể tăng lên do quá trình glycosyl hoặc methyl hóa. Ngoài ra, nghệ lên men bằng *L. casei* còn có

tác dụng trên bệnh béo phì thông qua việc điều hòa quá trình chuyển hóa lipid, viêm và sự nhạy cảm với insulin. Năm 2022, Nguyen Thi Thu Ha và cộng sự (2022) đã phân lập được 4 chất curcuminoid từ chiết xuất ethanol của thân rễ củ Nghệ vàng bao gồm curcumin, demethoxycurcumin, bisdemethoxycurcumin và cyclocurcumin. Cấu trúc hóa học của 4 chất này được thể hiện qua phổ NMR và phổ MS.  $IC_{50}$  của 4 chất curcuminoid này đạt giá trị từ 9,23 đến 14,6  $\mu\text{g/ml}$  trong thử nghiệm loại bỏ gốc tự do 2,2-diphenyl-1-picrylhydrazyl (DPPH) so với chứng dương là resveratrol ( $IC_{50} = 11,5 \mu\text{g/ml}$ ). Nghiên cứu của Nguyễn Thanh Tố Nhi và cộng sự (2024) đã cho kết quả so với cao chiết bột củ Nghệ ban đầu, cao chiết bột củ Nghệ được xử lý pectinase trong 1 giờ, sau lên men 72 giờ với tỷ lệ cấy *L. casei* 2,0% (tt/kl), cho MIC thấp hơn, giảm 16 lần (*Staphylococcus aureus* kháng methicillin), 32 lần (*Staphylococcus aureus* nhạy methicillin), hơn 16 lần (*Candida albicans*). Như vậy, ở Việt Nam, nghiên cứu về công nghệ lên men Nghệ còn hạn chế, mở ra cơ hội mới cho lĩnh vực sinh học và y dược.

## 2. NGUYÊN LIỆU VÀ PHƯƠNG PHÁP NGHIÊN CỨU

### 2.1 Nguyên liệu

Dược liệu sử dụng trong nghiên cứu là thân rễ Nghệ vàng (*Curcuma longa* L.) trưởng thành, được thu hoạch vào tháng 11-12 tại xã Tân Khánh Trung, huyện Lập Vò, tỉnh Đồng Tháp, sau đó được định danh hình thái, vi phẫu. Thân rễ Nghệ vàng được rửa sạch bằng nước máy nhằm loại bỏ bụi, tạp cơ học, đờ ráo, cắt lát, sấy khô ở 70 °C, trong 4 ngày, sau đó được xay mịn và sàng qua rây 35 mm theo Dược Điển Việt Nam V, bảo quản trong lọ thủy tinh tránh ánh sáng.

Vi sinh vật thử nghiệm bao gồm: *Lactobacillus plantarum* ATCC 21028, *Lactobacillus reuteri* ATCC 23272, *Lactobacillus casei* ATCC 393, *Cutibacterium*

*acnes* ATCC 6919.

### 2.2 Phương pháp nghiên cứu

#### 2.2.1 Phương pháp xử lý BNV với enzyme

Thử nghiệm được tiến hành dựa trên nghiên cứu của Le-Tan và cộng sự (2021). Cân 75g BNV ban đầu vào 150 mL đệm acetate pH 5,0 đã có sẵn enzyme pectinase với hoạt độ 30.000 U/g, ủ mẫu ở 50 °C trong 1 giờ, 3 giờ, 5 giờ. Trước khi thu mẫu, bất hoạt enzyme ở 80 °C, 5 phút. Tiến hành loại bỏ dịch lọc bằng cách ly tâm (5600 rpm trong 5 phút), thu cặn và rửa cặn nhiều lần bằng nước cất cho tới khi nước rửa đạt pH 6,5. Cặn sau khi rửa là BNV đã được xử lý với pectinase ở các thời gian khác nhau, và được sử dụng trực tiếp cho các thử nghiệm tiếp theo.

#### 2.2.2 Phương pháp khảo sát điều kiện lên men BNV

BNV sau khi xử lý với enzyme pectinase ở thời gian thích hợp, được điều chỉnh độ ẩm bằng môi trường MRS sao cho đạt 45,0 – 55,0% phù hợp cho quá trình lên men bán rắn (Liu và cộng sự, 2022) (MRS: BNV = 0,5 : 1,0), tiệt trùng bằng cách hấp ở 110 °C, 15 phút. Huyền dịch các chủng *L. casei*, *L. plantarum*, *L. reuteri* có mật độ  $10^6$  CFU/mL được cấy riêng lẻ vào BNV với các tỷ lệ khảo sát là 0,1%, 0,5%, 1,0%, 2,0%, 3,0% (tt/kl) (Lv và cộng sự, 2023), được ủ ở 37 °C, trong bình kín, thu mẫu sau 24, 48 và 72 giờ (Wu và cộng sự, 2018). Mỗi thử nghiệm được lặp lại 3 lần. Sau đó, mẫu được ly tâm 10.000 rpm trong 5 phút, loại dịch nổi, thu được BNV sau lên men dùng cho thử nghiệm chiết xuất cao.

#### 2.2.3 Phương pháp chiết cao BNV

Thử nghiệm được tiến hành dựa trên nghiên cứu của Nguyễn Văn Hân (2022). Các mẫu BNV được chiết xuất bằng phương pháp ngâm lạnh trong cồn 96,0% (BNV : dung môi = 1 : 10) 60 phút, sau đó được siêu âm ở 50 °C, 30 phút. Dịch chiết được lọc qua giấy lọc và cô quay thu hồi dung môi ở

55 °C. Độ ẩm của cao được xác định bằng cân sấy ẩm (không quá 20,0%), theo ĐCVN V (Bộ Y Tế, 2018).

#### 2.2.4 Đánh giá hoạt tính kháng khuẩn bằng phương pháp giếng khuếch tán

Phương pháp giếng khuếch tán được thực hiện để đánh giá hoạt tính kháng khuẩn của mẫu thử nghiệm, theo hướng dẫn của Viện Tiêu chuẩn xét nghiệm lâm sàng Hoa Kỳ (CLSI) M02-A12 có cải tiến (Clinical and Laboratory Standards Institute, 2015b). Chủng vi khuẩn *C. acnes* được nuôi cấy trong môi trường thạch BHA khoảng 48 – 72 giờ, 37 °C, nuôi trong bình có túi ủ kỵ khí. Dùng que cấy lấy khoảng 3 – 4 khóm giống nhau về hình thái pha trong dung dịch nước muối sinh lý bổ sung 0,05% Tween 80 và phân tán đều bằng máy vortex. Huyền dịch vi khuẩn sau khi pha loãng đạt mật độ khoảng  $1-2 \times 10^8$  CFU/mL sẽ được trải đều lên toàn bộ bề mặt thạch MHA. Đục các giếng có đường kính 6 mm, sau đó bơm khoảng 60  $\mu$ L cao chiết BNV (50 mg/mL trong DMSO 10,0%) vào giếng. Cuối cùng, các đĩa thạch được ủ ở tủ ấm 37 °C, trong bình có túi ủ kỵ khí, kiểm tra kết quả sau 72 giờ, nếu có xuất hiện vùng ức chế rõ rệt xung quanh giếng thử nghiệm, chứng tỏ kết quả dương tính, dịch chiết có chứa hoạt chất kháng vi khuẩn.

#### 2.2.5 Xác định nồng độ ức chế vi khuẩn tối thiểu (MIC) bằng phương pháp vi pha loãng trong môi trường lỏng

Phương pháp vi pha loãng trong môi trường lỏng được thực hiện dựa trên đĩa nhựa 96 giếng theo CLSI M07 – A10 có cải tiến (Clinical and Laboratory Standards Institute, 2015a), môi trường thử nghiệm là MHB. Các cao chiết BNV được hòa tan trong DMSO 1,0% để đạt nồng độ thử nghiệm là 50 mg/mL, sau đó pha loãng

trong môi trường thử nghiệm sao cho tạo thành dãy có nồng độ sau bằng  $\frac{1}{2}$  nồng độ trước, khoảng nồng độ của cao BNV trong giếng thử nghiệm là 1024  $\mu$ g/mL - 8  $\mu$ g/mL. Chủng dương là levofloxacin có khoảng nồng độ từ 8  $\mu$ g/mL - 0,0625  $\mu$ g/mL (Gonzalez và cộng sự, 2010). Nồng độ cuối của DMSO được sử dụng làm chứng âm là 0,05%. Huyền dịch vi khuẩn được thêm vào để đạt mật độ cuối là  $5 \times 10^5$  CFU/mL. Đĩa được ủ ở 37 °C, 72 giờ, trong bình có túi ủ kỵ khí. Sau ủ, 30  $\mu$ L resazurin 0,015% (kl/tt) được thêm vào mỗi giếng và ủ tiếp 2 – 4 giờ (Elshikh và cộng sự, 2016). Giá trị MIC được xác định là nồng độ thấp nhất của cao chiết ức chế hoàn toàn sự phát triển của vi khuẩn (giữ nguyên màu xanh của resazurin). Thử nghiệm được lặp lại 3 lần.

#### 2.2.6 Phương pháp xử lý số liệu

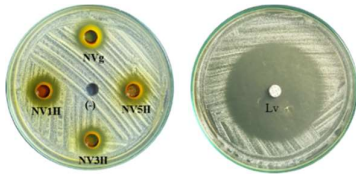
Sự khác biệt giữa các mốc thời gian xử lý BNV bởi enzyme pectinase và các điều kiện lên men BNV với chủng *Lactobacillus spp.* được xác định bằng phân tích thống kê một nhân tố (one-way ANOVA), phân tích thống kê hai nhân tố (two-way ANOVA), với mức ý nghĩa thống kê  $p < 0,05$ . Phân tích hậu kiểm Tukey được sử dụng để so sánh cặp khi có sự khác biệt có ý nghĩa. Tất cả các phân tích thống kê được thực hiện bằng phần mềm GraphPad Prism 10.

### 3. KẾT QUẢ VÀ THẢO LUẬN

#### 3.1 Kết quả xử lý BNV bằng enzyme pectinase

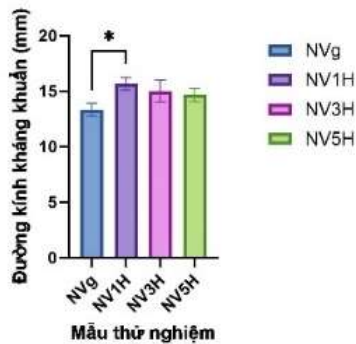
##### 3.1.1 Kết quả kháng khuẩn bằng phương pháp giếng khuếch tán

Kết quả đường kính vòng kháng khuẩn của các cao chiết BNV ban đầu và sau khi xử lý enzyme pectinase được trình bày ở Hình 1 và Hình 2.



**Hình 1. Thử nghiệm giếng khuếch tán của cao BNV ban đầu, sau xử lý enzyme pectinase và chứng dương**

(-): thay cao bằng DMSO 10,0%, Lv: Levofloxacin  
 NVg: Cao BNV không xử lý enzyme pectinase,  
 NV1H: Cao BNV sau xử lý enzyme pectinase 1 giờ,  
 NV3H: Cao BNV sau xử lý enzyme pectinase 3 giờ,  
 NV5H: Cao BNV sau xử lý enzyme pectinase 5 giờ



**Hình 2. Đường kính vòng kháng khuẩn C. acnes của cao BNV ban đầu và sau xử lý pectinase**

\*: khác biệt có ý nghĩa ( $p < 0,05$ )

**Bảng 1. Kết quả MIC của cao BNV ban đầu và sau xử lý enzyme pectinase**

Mẫu thử nghiệm	NVg	NV1H	NV3H	NV5H	Kháng sinh Levofloxacin
MIC ( $\mu\text{g/mL}$ )	1024	512	512	1024	0,5

(-): thay cao bằng DMSO 1,0%, Cao (-): Cao BNV không xử lý pectinase, không vi khuẩn

Dựa vào kết quả Bảng 1 cho thấy, MIC của các mẫu cao chiết nằm trong khoảng từ 512  $\mu\text{g/mL}$  đến 1024  $\mu\text{g/mL}$ . Mẫu cao BNV sau khi xử lý enzyme pectinase trong 1 giờ và 3 giờ đạt kết quả tốt nhất, giảm 2 lần so với mẫu BNV ban đầu và sau khi đã xử lý enzyme 5 giờ. Điều này cho thấy thời gian xử lý enzyme kéo dài đến 5 giờ không mang lại sự cải thiện về khả năng kháng khuẩn, thậm chí có thể làm giảm hiệu quả kháng khuẩn so với thời gian xử lý 1 giờ

và 3 giờ. Do đó, theo kết quả của phương pháp khuếch tán và phương pháp vi pha loãng trong môi trường lỏng, BNV sau xử lý enzyme pectinase 1 giờ được chọn cho thử nghiệm lên men với từng loài *Lactobacillus spp.*. Kết quả nghiên cứu tương đồng với nghiên cứu của (Le-Tan và cộng sự, 2021) năng suất chiết xuất của curcumin đạt 53,0% khi ủ Nghệ với enzyme pectinase trong 1 giờ, cao hơn so với mẫu không xử lý với enzyme pectinase trước khi chiết

### 3.1.2 Kết quả xác định MIC bằng phương pháp vi pha loãng trong môi trường lỏng

Kết quả nồng độ ức chế vi khuẩn tối thiểu (MIC) của các cao BNV ban đầu và sau khi xử lý enzyme bằng phương pháp vi pha loãng trên đĩa 96 giếng với nồng độ ban đầu của các mẫu là 1024 ( $\mu\text{g/mL}$ ), nồng độ ban đầu của kháng sinh Levofloxacin là 8 ( $\mu\text{g/mL}$ ) được thể hiện qua Bảng 1.

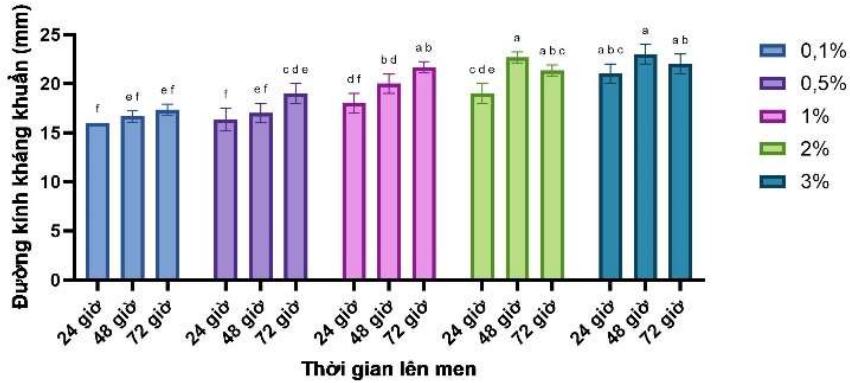
xuất. Ngoài ra, Muniglia và cộng sự (2014) đã chứng minh khi thời gian xử lý enzyme quá lâu, có thể dẫn đến sự phân hủy các hợp chất hoạt tính sinh học như curcumin, polyphenol, và anthocyanidin. Tiếp xúc kéo dài ở nhiệt độ cao hoặc quá trình oxy hóa cũng gây ra sự phân hủy hoạt tính sinh học. Điều này cũng lý giải cho hoạt tính kháng *C.acnes* của cao BNV sau xử lý pectinase 5 giờ (MIC = 1024 µg/mL) giảm hơn so với 1

giờ và 3 giờ (MIC = 512 µg/mL).

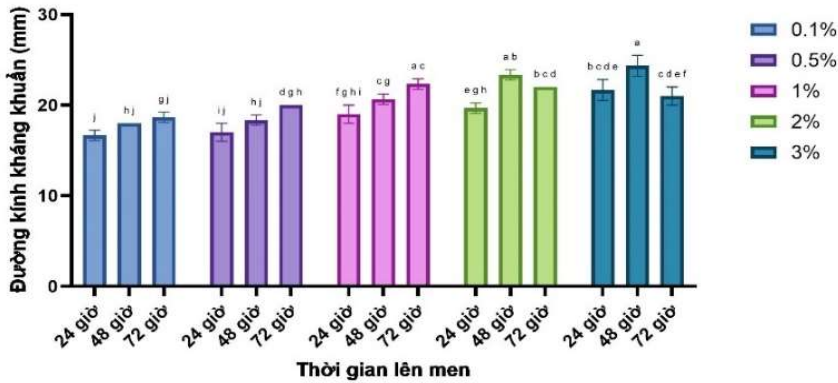
### 3.2 Kết quả khảo sát điều kiện lên men BNV bằng *Lactobacillus* spp.

#### 3.2.1 Kết quả kháng khuẩn bằng phương pháp giếng khuếch tán

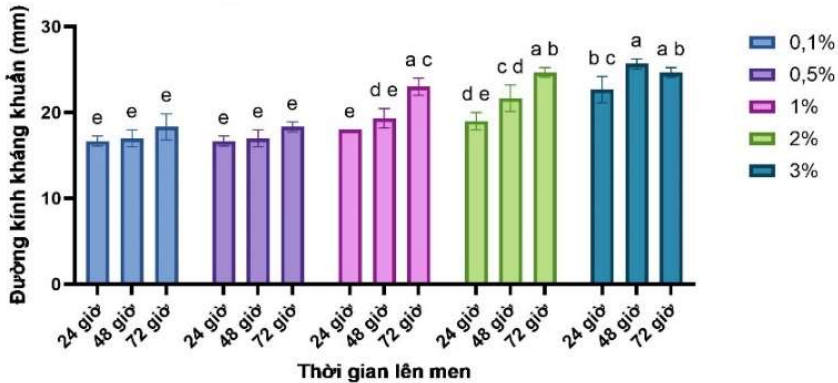
Kết quả đường kính vòng kháng khuẩn *C. acnes* của các mẫu cao chiết BNV sau khi lên men bằng *Lactobacillus* spp. được thể hiện ở Hình 3, Hình 4 và Hình 5.



Hình 3. Khả năng kháng *C. acnes* của cao BNV lên men bởi *L. reuteri*

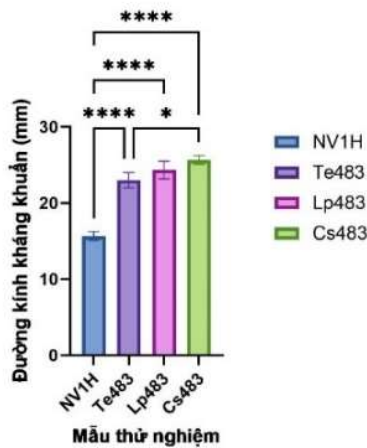


Hình 4. Khả năng kháng *C. acnes* của cao BNV lên men bởi *L. plantarum*



Hình 5. Khả năng kháng *C. acnes* của cao BNV lên men bởi *L. plantarum*

Các giá trị trung bình của các mẫu cao BNV lên men cùng một loài *Lactobacillus* sp. có chữ cái khác nhau thì khác biệt có ý nghĩa thống kê ( $p < 0,05$ )



**Hình 6. Khả năng kháng C. acnes của cao BNV lên men 3,0% Lactobacillus spp.**

\*: khác biệt có ý nghĩa ( $p < 0,05$ ) \*\*: khác biệt có ý nghĩa ( $p < 0,01$ ) \*\*\*: khác biệt có ý nghĩa ( $p < 0,001$ ) \*\*\*\*: khác biệt có ý nghĩa ( $p < 0,0001$ ), Te483: Cao BNV lên men chủng *L. reuteri* 3,0% 48 giờ, Lp483: Cao BNV lên men chủng *L. plantarum* 3,0% 48 giờ, Cs483: Cao BNV lên men chủng *L. casei* 3,0% 48 giờ

Dựa trên phân tích thống kê hai yếu tố (two-way ANOVA), kết quả phân tích hậu kiểm Tukey cho thấy tỷ lệ cấy chủng ban đầu và thời gian lên men ảnh hưởng đến đường kính vòng kháng khuẩn ( $p < 0,05$ ). Hình 3, hình 4 và hình 5 cho thấy cao BNV lên men với 0,5% *L. reuteri*, 1,0% *L. reuteri*, 0,5% *L. plantarum*, 1,0% *L. plantarum*, thu mẫu ở 72 giờ cho kết quả đường kính vòng kháng khuẩn cao nhất, khác biệt có ý nghĩa thống kê so với thu mẫu ở 24 giờ ( $p < 0,05$ ). Cao BNV lên men với 1,0% *L. casei*, 2,0% *L. casei* thu mẫu ở 72 giờ cho đường kính vòng kháng khuẩn cao nhất, khác biệt có ý nghĩa thống kê so với thu mẫu ở 24 giờ và 48 giờ ( $p < 0,05$ ). Tuy nhiên, cao BNV lên

men với 2,0% *L. reuteri*, 2,0% *L. plantarum*, 3,0% *L. casei*, thu mẫu ở 48 giờ cho kết quả đường kính vòng kháng khuẩn cao nhất, khác biệt có ý nghĩa thống kê so với thu mẫu ở 24 giờ ( $p < 0,05$ ). Đồng thời, cao BNV lên men với 3,0% *L. plantarum*, thu mẫu ở 48 giờ cho kết quả đường kính vòng kháng khuẩn cao nhất, khác biệt có ý nghĩa thống kê so với thu mẫu ở 24 giờ và 72 giờ ( $p < 0,05$ ). Như vậy, khi tỷ lệ cấy ban đầu tăng lên thì thời gian lên men được rút ngắn lại và kết quả đường kính vòng kháng khuẩn là cao nhất và nhìn chung BNV lên men với 3,0% *Lactobacillus* spp., sau 48 giờ cải thiện đáng kể đường kính vòng kháng khuẩn *C. acnes*. Kết quả phân tích thống kê một yếu tố (one-way ANOVA) về đường kính vòng kháng khuẩn của các mẫu BNV không và có lên men với 3,0% *Lactobacillus* spp., sau 48 giờ được thể hiện ở hình 6 cho thấy, cao BNV lên men với 3,0% *L. casei* sau 48 giờ cho đường kính vòng kháng khuẩn *C. acnes* cao nhất, khác biệt có ý nghĩa thống kê ( $p < 0,05$ ) so với cao BNV đã xử lý enzyme pectinase 1 giờ, không lên men và cao BNV lên men với 3,0% *L. reuteri* sau 48 giờ. Tóm lại, BNV lên men với 3,0% *L. casei* sau 48 giờ đã cải thiện đáng kể đường kính vòng kháng khuẩn *C. acnes*.

### 3.1.2 Kết quả xác định MIC bằng phương pháp vi pha loãng trong môi trường lỏng

Kết quả thử nồng độ ức chế tối thiểu MIC của các cao chiết BNV sau khi lên men bằng phương pháp vi pha loãng trên đĩa 96 giếng với nồng độ ban đầu của các mẫu là 1024 ( $\mu\text{g/mL}$ ), được thể hiện qua Bảng 2.

**Bảng 2. Bảng kết quả MIC của các cao BNV sau lên men**

Mẫu cao BNV lên men (1024 $\mu\text{g/mL}$ )	Ký hiệu mẫu	MIC
BNV lên men chủng <i>L. reuteri</i> 0,1% 24 giờ	Te2401	512
BNV lên men chủng <i>L. reuteri</i> 0,1% 48 giờ	Te4801	512
BNV lên men chủng <i>L. reuteri</i> 0,1% 72 giờ	Te7201	512
BNV lên men chủng <i>L. reuteri</i> 0,5% 24 giờ	Te2405	512

BNV lên men chủng <i>L. reuteri</i> 0,5% 48 giờ	Te4805	512
BNV lên men chủng <i>L. reuteri</i> 0,5% 72 giờ	Te7205	256
BNV lên men chủng <i>L. reuteri</i> 1,0% 24 giờ	Te241	256
BNV lên men chủng <i>L. reuteri</i> 1,0% 48 giờ	Te481	128
BNV lên men chủng <i>L. reuteri</i> 1,0% 72 giờ	Te721	128
BNV lên men chủng <i>L. reuteri</i> 2,0% 24 giờ	Te242	256
BNV lên men chủng <i>L. reuteri</i> 2,0% 48 giờ	Te482	64
BNV lên men chủng <i>L. reuteri</i> 2,0% 72 giờ	Te722	128
BNV lên men chủng <i>L. reuteri</i> 3,0% 24 giờ	Te243	128
BNV lên men chủng <i>L. reuteri</i> 3,0% 48 giờ	Te483	64
BNV lên men chủng <i>L. reuteri</i> 3,0% 72 giờ	Te723	64
BNV lên men chủng <i>L. plantarum</i> 0,1% 24 giờ	Lp2401	512
BNV lên men chủng <i>L. plantarum</i> 0,1% 48 giờ	Lp4801	256
BNV lên men chủng <i>L. plantarum</i> 0,1% 72 giờ	Lp7201	256
BNV lên men chủng <i>L. plantarum</i> 0,5% 24 giờ	Lp2405	512
BNV lên men chủng <i>L. plantarum</i> 0,5% 48 giờ	Lp4805	256
BNV lên men chủng <i>L. plantarum</i> 0,5% 72 giờ	Lp7205	128
BNV lên men chủng <i>L. plantarum</i> 1,0% 24 giờ	Lp241	256
BNV lên men chủng <i>L. plantarum</i> 1,0% 48 giờ	Lp481	128
BNV lên men chủng <i>L. plantarum</i> 1,0% 72 giờ	Lp721	128
BNV lên men chủng <i>L. plantarum</i> 2,0% 24 giờ	Lp242	128
BNV lên men chủng <i>L. plantarum</i> 2,0% 48 giờ	Lp482	64
BNV lên men chủng <i>L. plantarum</i> 2,0% 72 giờ	Lp722	64
BNV lên men chủng <i>L. plantarum</i> 3,0% 24 giờ	Lp243	64
<b>BNV lên men chủng <i>L. plantarum</i> 3,0% 48 giờ</b>	<b>Lp483</b>	<b>32</b>
BNV lên men chủng <i>L. plantarum</i> 3,0% 72 giờ	Lp723	64
BNV lên men chủng <i>L. casei</i> 0,1% 24 giờ	Cs2401	512
BNV lên men chủng <i>L. casei</i> 0,1% 48 giờ	Cs4801	512
BNV lên men chủng <i>L. casei</i> 0,1% 72 giờ	Cs7201	256

BNV lên men chủng <i>L. casei</i> 0,5% 24 giờ	Cs2405	512
BNV lên men chủng <i>L. casei</i> 0,5% 48 giờ	Cs4805	256
BNV lên men chủng <i>L. casei</i> 0,5% 72 giờ	Cs7205	256
BNV lên men chủng <i>L. casei</i> 1,0% 24 giờ	Cs241	256
BNV lên men chủng <i>L. casei</i> 1,0% 48 giờ	Cs481	128
BNV lên men chủng <i>L. casei</i> 1,0% 72 giờ	Cs721	64
BNV lên men chủng <i>L. casei</i> 2,0% 24 giờ	Cs242	256
BNV lên men chủng <i>L. casei</i> 2,0% 48 giờ	Cs482	64
<b>BNV lên men chủng <i>L. casei</i> 2,0% 72 giờ</b>	<b>Cs722</b>	<b>32</b>
BNV lên men chủng <i>L. casei</i> 3,0% 24 giờ	Cs243	64
<b>BNV lên men chủng <i>L. casei</i> 3,0% 48 giờ</b>	<b>Cs483</b>	<b>32</b>
<b>BNV lên men chủng <i>L. casei</i> 3,0% 72 giờ</b>	<b>Cs723</b>	<b>32</b>

Dựa vào kết quả Bảng 2 cho thấy, cao chiết BNV sau khi lên men với 2,0% *L. casei*, 3,0% *L. casei* sau 72 giờ và 3,0% *L. plantarum*, 3,0% *L. casei* sau 48 giờ cho giá trị MIC thấp nhất là 32 µg/mL so với cao chiết BNV sau khi xử lý enzyme pectinase 1 giờ, không lên men. Như vậy giá trị MIC càng thấp khi tăng tỷ lệ cấy vi khuẩn ban đầu, và có thể rút ngắn được thời gian lên men. Do đó, thông qua thử nghiệm vi pha loãng trong môi trường lỏng, BNV lên men với 3,0% *Lactobacillus spp.*, sau 48 giờ đều cải thiện hoạt tính kháng khuẩn (MIC = 32 µg/mL đối với *L. plantarum* và *L. casei*, MIC = 64 µg/mL đối với *L. reuteri*). Tóm lại, thông qua hoạt tính kháng khuẩn, BNV lên men với 3,0% *Lactobacillus spp.* sau 48 giờ cho kết quả đường kính vòng kháng khuẩn cao nhất, thể hiện rõ nhất khi lên men bằng *L. casei*, tăng khoảng 1,6 lần so với BNV có xử lý pectinase 1 giờ, không lên men và giá trị MIC thấp nhất, thể hiện ở cả 3 loài *Lactobacillus spp.* khảo sát, giảm 16 lần so với BNV có xử lý pectinase 1 giờ, không lên men. Kết quả tương đồng với nghiên cứu của (Salve và cộng sự, 2023) cũng khẳng định việc lên

men Nghệ vàng trong 48 giờ ở 37 °C làm tăng đáng kể hàm lượng curcuminoid, bao gồm curcumin, demethoxycurcumin và bisdemethoxycurcumin, các hoạt tính kháng viêm và hoạt tính chống oxy hóa cũng được nâng cao. Trong nghiên cứu của Lin và cộng sự (2024), *L. paracasei* 2,0% được bổ sung vào môi trường lên men bột thân rễ Nghệ vàng cho kết quả tăng sinh khả dụng của curcuminoid do quá trình glycosyl hoặc methyl hóa, mặc dù hàm lượng curcuminoid giảm. Ngoài ra, cao BNV lên men bởi *L. casei* 3,0%, *L. plantarum* 3,0%, sau 48 giờ đều cho kết quả MIC = 32 µg/mL, tuy nhiên cao BNV lên men bởi *L. casei* 3,0%, 48 giờ cho kết quả đường kính vòng kháng khuẩn cao hơn BNV trước lên men và lên men bởi *L. reuteri* (p<0,05), trong khi cao BNV lên men bởi *L. plantarum* 3,0%, 48 giờ cho kết quả đường kính vòng kháng khuẩn cao hơn BNV trước lên men (p<0,05) và cao hơn BNV lên men bởi *L. reuteri* không có ý nghĩa thống kê. Do đó, BNV có xử lý pectinase 1 giờ và được lên men bởi *L. casei* đã cải thiện hoạt tính kháng *C. acnes* rõ rệt hơn khi được lên men bởi *L. reuteri* và *L. plantarum*.

#### 4. KẾT LUẬN VÀ ĐỊNH HƯỚNG NGHIÊN CỨU

Nghiên cứu đã thiết lập được quy trình xử lý BNV ban đầu: BNV được ủ với enzyme pectinase 30.000 U/g trong hệ đệm acetate pH 5,0, nhiệt độ 50 °C trong 1 giờ. Kết quả cho thấy hoạt tính kháng khuẩn *C. acnes* ở điều kiện trên là tốt nhất, đường kính vòng kháng khuẩn là  $15,67 \pm 0,58$  mm, nồng độ ức chế vi khuẩn tối thiểu là 512 µg/mL. Đồng thời thiết lập được điều kiện lên men BNV bởi *L. casei* với các thông số như: BNV được làm ấm bằng MRS (MRS : BNV = 0,5 : 1), mật độ vi khuẩn đầu vào  $10^6$

CFU/mL, tỷ lệ cấy chủng là 3,0% và thời gian lên men là 48 giờ. Kết quả cho thấy cao chiết BNV sau lên men với *L. casei* ở điều kiện trên có hoạt tính kháng vi khuẩn *C. acnes* tốt hơn cao chiết BNV ban đầu, đường kính vòng kháng khuẩn *C. acnes* là  $25,67 \pm 0,58$  mm (tăng 1,8 lần), nồng độ ức chế vi khuẩn tối thiểu là 32 µg/mL (giảm 32 lần). Bên cạnh đó, nhóm nghiên cứu đề xuất khảo sát hoạt tính kháng viêm, chống oxy hóa, phân tích thành phần hóa học của BNV sau lên men nhằm hỗ trợ định hướng ứng dụng trong mỹ phẩm tốt hơn

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## INVESTIGATION OF THE ANTIBACTERIAL ACTIVITY OF TURMERIC POWDER FERMENTED BY *LACTOBACILLUS SPP.* AGAINST *CUTIBACTERIUM ACNES*

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**Abstract:** Fermentation technology of turmeric powder (TP) with microorganisms, such as *Lactobacillus spp.*, that treat dermatological conditions, particularly those related to *Cutibacterium acnes*, presents a promising research direction. This study aimed to screen the anti-*C. acnes* activity of TP in both non-fermented and fermented turmeric powder with individual *Lactobacillus spp.*. TP was incubated with pectinase enzyme for 1 hour, 3 hours, and 5 hours, and subsequently fermented with *Lactobacillus reuteri*, *Lactobacillus plantarum*, and *Lactobacillus casei* at concentrations of 0.1%, 0.5%, 1.0%, 2.0%, and 3.0% for 24, 48, and 72 hours. The TP samples were extracted with 96.0% ethanol using cold soaking combined with ultrasound, and their antibacterial activity against *C. acnes* was evaluated. The results demonstrated that, compared to original TP, TP incubated with 30.000 U/g pectinase enzyme in acetate buffer (pH 5.0, 50°C) for 1 hour and then fermented with 3.0% *L. casei* for 48 hours, exhibits a better anti-*C. acnes* activity, with a 32 times reduction in the minimum inhibitory concentration (MIC = 32 µg/mL). Thus, the anti-*C. acnes* activity was significantly improved after fermentation by *L. spp.*, especially 3.0% *L. casei* for 48h.

**Keywords:** antibacterial activity, *Curcuma longa*, *Cutibacterium acnes*, *Lactobacillus*, semi-solid fermentation, turmeric powder

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### **Note**

The authors declare no competing interests.

# RESEARCH ON THE EXTRACTION AND PROCESSING OF CHICKEN EGG SHELL MEMBRANE TOWARD POTENTIAL BIOMEDICAL APPLICATIONS

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**Abstract:** Eggshell membrane (ESM) is a promising waste by-product from the food processing industry, easily collected at no material cost. Rich in collagen, glycosaminoglycans, and a natural fibrous structure, ESM represents a valuable low-cost biomaterial with inherent biological functionality. Moreover, utilizing ESM aligns with the waste-to-value concept, contributing to both biomedical innovation and environmental sustainability. This study investigated the extraction and treatment of ESM by using different ratios of organic acids (acetic acid and citric acid) to improve its physical properties and evaluate its potential biomedical applications. The processing method does not require advanced fabrication technologies such as electrospinning or 3D printing, making it suitable for laboratories with limited technical resources. ESM samples were treated with acid ratios ranging from 1:1 to 1:10 and analyzed thickness, porosity, fluid absorption capacity, and surface morphology using scanning electron microscopy (SEM). Cytotoxicity tests indicated that the treated ESM is potentially suitable as a scaffold for cell culture. Based on these findings, ESM treated with a 1:8 organic acid ratio shows promising potential for applications in biomedical and pharmaceutical fields, particularly in wound dressing materials and *in vitro* tissue models.

**Keywords:** biomedical potential, cell culture scaffold, cytotoxicity, eggshell membrane, *in vitro* tissue model, low-cost biomaterial, organic acid treatment

## 1. INTRODUCTION

The eggshell membrane (ESM) is a semi-permeable fibrous layer located between the eggshell and the egg white. As a waste-to-value material, ESM represents a sustainable and low-cost source of functional biopolymers, reducing environmental burden while offering potential biomedical utility. Biologically, it is naturally rich in type I collagen, glycosaminoglycans, glycoproteins, and other filamentous proteins, forming a fibrous architecture that resembles the extracellular matrix and supports cellular adhesion and regeneration. Several studies have suggested that ESM may be suitable for applications such as

wound dressings, drug delivery systems, and tissue engineering scaffolds (Chen et al., 2022; Kalluri et al., 2024). However, untreated ESM typically exhibits a dense and compact structure with relatively low porosity (often below 50–55%) and limited fluid interaction (Aggarwal et al., 2024; Esmaeili et al., 2024; Torres-Mansilla et al., 2023), which restrict nutrient exchange, water uptake, and cellular infiltration. Addressing these structural gaps is therefore critical to unlock the full biomedical potential of ESM. (Aggarwal et al., 2024; Esmaeili et al., 2024)

In recent years, natural-origin biomaterials have attracted growing interest

due to their renewability, accessibility, and biocompatibility. ESM has been highlighted for its structural similarity to the extracellular matrix (ECM), which allows it to function as a biological scaffold for cell adhesion and tissue regeneration (Malahayati & Wardhani Widowati, 2024; Mensah et al., 2023; Torres-Mansilla et al., 2023). However, to fully realize these potential applications, appropriate processing methods are needed to improve its microstructure and surface properties.

One practical approach involves chemical modification using organic acids. Acetic acid and citric acid are widely used agents due to their mild reactivity, availability, and biosafety. These acids disrupt hydrogen bonding within the protein network, resulting in partial denaturation of collagen fibers and subsequently improving surface area, porosity, and hydrophilicity (Choi et al., 2021). Most existing studies, however, focus on single-acid treatments or a limited range of ratios, lacking comprehensive evaluations of how acid combinations affect the physical and biological performance of ESM.

Unlike many current tissue engineering approaches that rely on advanced fabrication technologies such as electrospinning, 3D bioprinting, cold plasma treatment, or laser ablation, the method proposed in this study does not require such complex techniques. Instead, it embraces the principle of utilizing what nature provides by developing a simple and accessible approach for processing ESM without reliance on high-tech methods.

This research investigates the effects of different acetic–citric acid ratios on the morphology, porosity, thickness, fluid absorption capacity, and cytotoxicity of ESM. It is hypothesized that the organic acid ratio plays a critical role in determining the structural and functional properties of the material. The outcomes of this study are expected to contribute to the

development of a low-cost, scalable method for preparing ESM-based biomaterials for potential applications in biomedical and pharmaceutical contexts, particularly in wound dressings and *in vitro* tissue models.

## 2. RESEARCH METHODS

### 2.1. Materials

Eggshell membranes (ESM) were collected from the inner lining of commercial chicken eggs sourced in Vietnam. The eggs were not traceable to any specific breed or supplier, and the source was not subject to controlled conditions.

All chemicals used in this study were of analytical reagent (AR) grade and applied without further purification. The L-929 mouse fibroblast cell line was obtained from the American Type Culture Collection (ATCC). Cell culture experiments were conducted using DMEM/F12 medium supplemented with 10% fetal bovine serum (FBS) and 1% penicillin-streptomycin. All procedures were performed followed laboratory biosafety protocols.

### 2.2. Preparation and acid treatment

The inner membranes were manually separated from commercial chicken eggshells and thoroughly rinsed with distilled water to remove residual albumen. Clean membranes were then divided into six experimental groups and immersed in mixed organic acid solutions at different volume ratios of acetic acid (Xilong Scientific, PRC) to citric acid (Xilong Scientific, PRC): 1:1, 1:2, 1:4, 1:6, 1:8, and 1:10. The treatment was conducted at room temperature ( $25 \pm 2^\circ\text{C}$ ) for 24 hours.

After treatment, all samples were rinsed with distilled water until neutral pH was reached, then freeze-dried to preserve the structural integrity and biological activity of the material. The drying process was performed using a freeze dryer (BenchTop Pro, Virtis – SP Scientific, USA), simulating

the method described by (Merivaara et al., 2021). The dried samples were stored at room temperature ( $25 \pm 2^\circ\text{C}$ ) for subsequent analyses.

### 2.3. Thickness

The membrane thickness was determined using a digital micrometer (293-240-30, Mitutoyo, Japan) with a resolution of 0.001 mm. The device was regularly calibrated and verified at a metrology laboratory accredited under ISO 17025 standards. To ensure measurement reliability and eliminate local variation, each membrane was measured at five fixed positions: top, bottom, left, right, and center. The results were used to assess material uniformity and served as a basis for analyzing correlations between thickness and other physicochemical parameters.

### 2.4. Fluid absorption capacity

The fluid absorption capacity of the ESM was determined by immersing dry samples in laboratory-prepared PBS solution for 24 hours. Each sample was first weighed ( $W_0$ ) using an analytical balance (AX224N Adventurer, Ohaus, USA), calibrated and certified by an ISO 17025-accredited calibration laboratory. After immersion, the samples were briefly rinsed several times with distilled water to remove excess salts, then soaked again in distilled water to stabilize. The samples were then removed and reweighed ( $W_{24}$ ). Absorption capacity was calculated using the formula which following a gravimetric method commonly applied in ESM studies (Esmaeili et al., 2024; Torres-Mansilla et al., 2023):

$$\text{Absorption (\%)} = \frac{W_{24} - W_0}{W_0} \times 100$$

### 2.5. Porosity

The porosity of the ESM samples was estimated using a gravimetric method. Each dry sample was weighed ( $W_0$ ) and then fully immersed in distilled water until saturation. After soaking, surface water was gently

blotted using filter paper, and the sample was weighed again ( $W_1$ ) using the same calibrated analytical balance as described in the previous section. The geometric volume ( $V$ ) of each sample was calculated based on its measured thickness and surface area. The volume of water retained within the porous structure was calculated as the absorbed water mass divided by the density of water ( $\rho = 1 \text{ g/cm}^3$ ). Porosity was then expressed using the following equation which following a gravimetric method commonly applied in ESM studies (Esmaeili et al., 2024; Torres-Mansilla et al., 2023):

$$\text{Porosity (\%)} = \frac{W_1 - W_0}{\rho \times V} \times 100$$

### 2.6. Surface morphology

The surface morphology of the treated ESM samples was analyzed using a scanning electron microscope (SEM, Zeiss, Germany) at a magnification of  $2000\times$ . SEM analysis enabled detailed observation of the microstructure, including fiber organization, pore distribution, fiber-fiber connectivity, and surface uniformity. These characteristics are crucial in assessing the material's potential for biomedical applications, particularly as scaffolds for cell culture or as bioactive wound coverings. The acquired micrographs served as a basis for comparing the effects of different organic acid ratios on the structural integrity and surface features of the ESM.

### 2.7. Cytotoxicity

The indirect cytotoxicity of the treated ESM materials was evaluated based on the effect of extraction media on cell viability and proliferation. Prior to testing, the ESM samples were sterilized using gamma irradiation at a dose of 25 kGy and subjected to sterility testing in accordance with the Vietnamese Pharmacopoeia V to ensure no microbial contamination during *in vitro* assessment.

The preparation of extraction media

followed the guidelines outlined in ISO 10993-12. Each ESM sample was incubated in cell culture medium under sterile conditions at 37°C for 24 hours. The resulting extracts were then applied to mouse fibroblast L-929 cells and incubated under standard culture conditions (37°C, 5% CO<sub>2</sub>) for another 24 hours. Cell viability was assessed using the MTT assay, and absorbance was measured at 570 nm. The relative growth rate (RGR) was calculated using the following equation:

$$RGR (\%) = \frac{OD_{ESM}}{OD_{negative\ control}} \times 100$$

According to ISO 10993-5, a material is considered non-cytotoxic if RGR  $\geq$  70%; otherwise, it is classified as cytotoxic.

## 2.8. Statistical analysis

Data are expressed as mean  $\pm$  standard deviation (SD), and the coefficient of variation (CV%) was calculated as (SD/mean  $\times$  100) to indicate data stability among replicates.

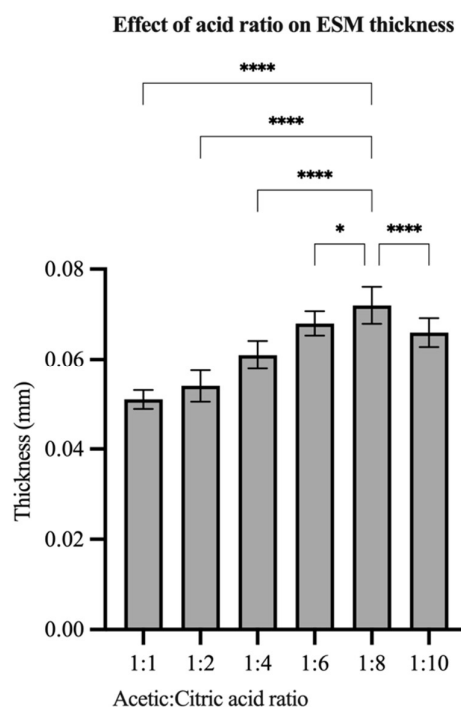
## 3. RESULTS AND DISCUSSION

### 3.1. Thickness

The thickness of ESM samples exhibited clear variation depending on the acid treatment ratio (Figure 1). Among the tested groups, the 1:8 ratio (1 part acetic acid to 8 parts citric acid) resulted in the highest average thickness (0.072  $\pm$  0.004 mm), with statistically significant differences compared to all other ratios ( $p < 0.05$ ). This group also demonstrated consistent values across replicates, indicating processing stability. The lowest thickness was observed in the 1:1 group (0.051  $\pm$  0.002 mm), while intermediate values were recorded for the other ratios (ranging from 0.054 to 0.068 mm).

Thickness is a critical physical parameter for ESM intended for biomedical use, particularly in wound dressing and soft tissue scaffolding. Membranes with

insufficient thickness may lose mechanical integrity in wet conditions, whereas excessively thick membranes may hinder flexibility and permeability. The 1:8 group presented the highest average thickness (0.072  $\pm$  0.004 mm), with a coefficient of variation (CV%) of 5.6%, indicating consistent measurement across replicates. This group therefore represents a desirable balance between robustness and flexibility, making it a promising candidate for further development.



**Figure 1. Thickness of ESM after acid treatment**

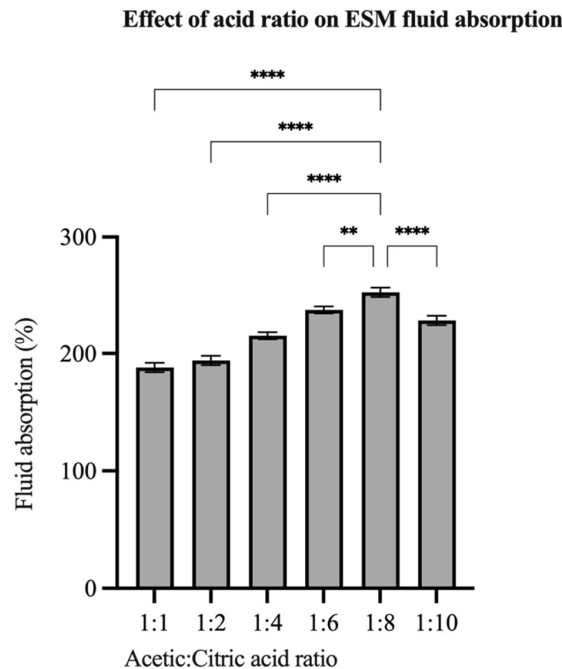
Data are presented as mean  $\pm$  SD and CV% ( $n = 3$ ). Asterisks indicate statistically significant differences: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ .

These findings are consistent with previous reports. Carboxylic acid treatment has been shown to enhance the biological performance of ESM in wound healing applications (Choi et al., 2021). Although that study did not evaluate different acid ratios, it supports the potential of acid-modified ESM for regenerative medicine. Our identification of the 1:8 ratio as the optimal

condition underscores the importance of fine-tuning treatment parameters to obtain membranes with favorable structural and functional properties through a simple and accessible protocol.

### 3.2. Fluid absorption capacity

The fluid absorption capacity of ESM samples showed a progressive increase with higher proportions of citric acid in the treatment solution (Figure 2). The 1:8 acetic: citric acid group demonstrated the highest absorption value ( $252.8 \pm 3.9\%$ ,  $CV = 1.54\%$ ), followed by the 1:10 group ( $228.5 \pm 4.4\%$ ,  $CV = 1.93\%$ ). These values were significantly higher than those recorded in the 1:1 and 1:2 groups ( $188.4 \pm 4.1\%$ ,  $CV = 2.18\%$  and  $194.2 \pm 3.5\%$ ,  $CV = 1.80\%$ , respectively), suggesting enhanced hydrophilicity and swelling behavior associated with increased citric acid content.



**Figure 2. Fluid absorption capacity of ESM after acid treatment**

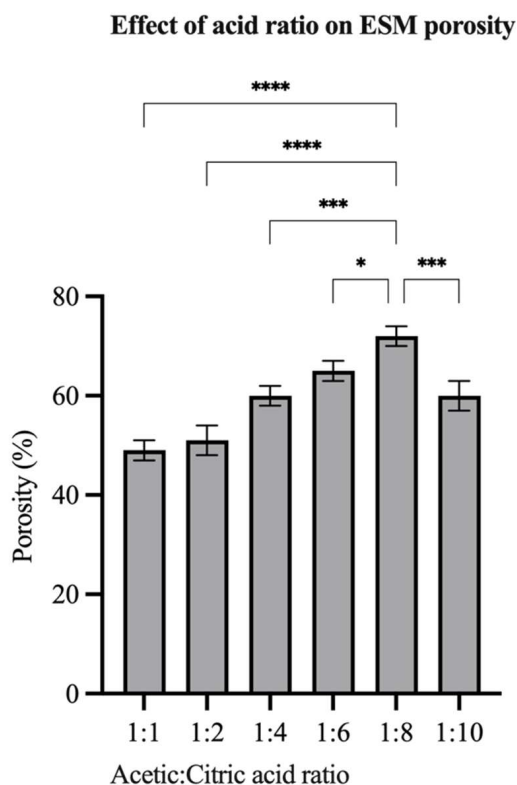
Data are presented as mean  $\pm$  SD and CV% ( $n = 3$ ). Asterisks indicate statistically significant differences: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ .

Although citric acid plays a dominant role in improving fluid retention, further increase beyond the 1:8 ratio (i.e., in the 1:10 group) resulted in slightly reduced absorption, likely due to excessive structural softening or collapse. Therefore, 1:8 appears to offer the best balance between porosity, fluid retention, and material integrity.

Statistical analysis confirmed that the 1:8 group exhibited a significantly higher fluid absorption capacity compared to all other experimental groups ( $p < 0.05$ ). This highlights the effectiveness of the 1:8 ratio in modifying ESM for moisture-sensitive biomedical applications such as wound dressings or hydrated scaffolds.

### 3.3. Porosity

Porosity is a key determinant in evaluating the biomedical applicability of membrane-based biomaterials, especially in contexts requiring moisture retention, nutrient exchange, and cellular infiltration. In this study, the porosity values of ESM samples exhibited a clear upward trend with increasing citric acid content (Figure 3). The 1:8 acetic: citric acid group exhibited the highest porosity ( $72 \pm 2\%$ ,  $CV = 2.78\%$ ), followed by the 1:6 group ( $65 \pm 2\%$ ,  $CV = 3.08\%$ ). In contrast, lower-ratio groups such as 1:1 and 1:2 recorded markedly reduced porosity values ( $49 \pm 2\%$ ,  $CV = 4.08\%$  and  $51 \pm 3\%$ ,  $CV = 5.88\%$ , respectively). These results highlight that increased citric acid treatment enhances porosity and structural openness, which are desirable features for biomedical applications.



**Figure 3. Porosity of ESM after acid treatment**

Data are presented as mean  $\pm$  SD and CV% ( $n = 3$ ). Asterisks indicate statistically significant differences: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$ .

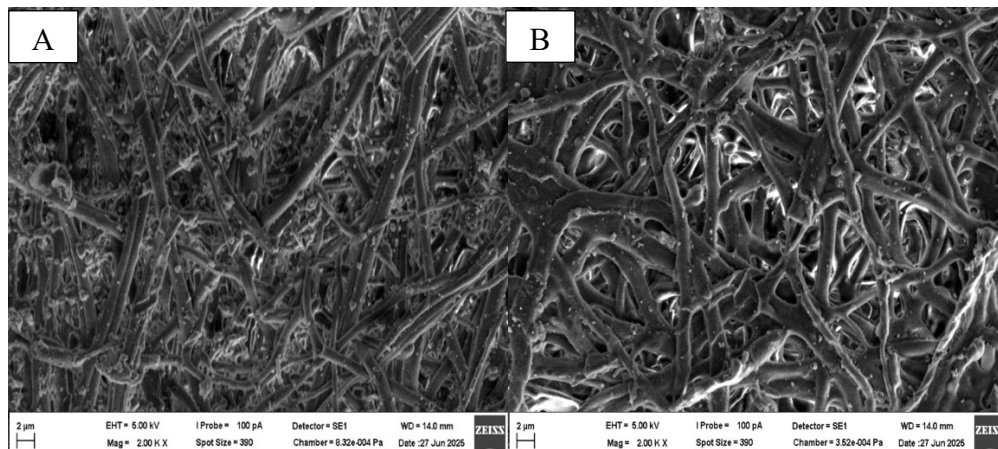
This progressive increase is likely due to enhanced disruption of inter-fiber hydrogen bonding and partial denaturation

of collagenous proteins under mildly acidic conditions, particularly when citric acid concentration is sufficiently high. The resulting structural loosening facilitates the formation of an open, sponge-like architecture — a favorable characteristic for applications in wound dressings or scaffold matrices.

Importantly, statistical analysis confirmed that the porosity of the 1:8 group was significantly higher than that of all other treatment groups ( $p < 0.05$ ). This indicates that the 1:8 acid ratio not only improves porosity but does so in a reproducible and statistically robust manner, positioning it as the optimal treatment condition for enhancing material permeability and biological responsiveness.

### 3.4. Surface morphology

The surface morphology of the ESM samples before and after acid treatment was visualized using SEM at 2000 $\times$  magnification (Figure 4). The untreated sample exhibited a dense and compact fibrous network with minimal porosity and poor surface roughness (Figure 4A). In contrast, the 1:8 acetic: citric acid-treated sample displayed a clearly loosened structure with increased fiber separation, well-distributed pores, and an open mesh-like appearance (Figure 4B).



**Figure 4. SEM images of ESM surface morphology before and after acid treatment**

- (A) Untreated ESM: Dense and compact fiber structure with limited visible porosity
- (B) Treated ESM (1:8 acetic: citric): Loosely arranged fibers with expanded gaps and increased pore density, forming an open porous network

This morphological transformation can be attributed to the acid blend's ability to disrupt cross-linking within protein matrices, especially collagen and glycoproteins, resulting in increased pore formation (Choi et al., 2021). In addition, the use of sublimation drying preserved the delicate porous architecture without collapsing the matrix (Merivaara et al., 2021).

This finding is consistent with multiple prior studies. Previous reports demonstrated that carboxylic acid-treated ESM promoted wound healing and fibroblast attachment (Choi et al., 2021), and emphasized the versatility of ESM as a sustainable scaffold for biomedical applications (Mensah et al., 2023). Processed ESM has also been successfully applied in wound healing models (Ahmed et al., 2019), while its porous and biocompatible characteristics have been reported to support tissue regeneration (Torres-Mansilla et al., 2023). The structural changes observed in our 1:8 treatment group reflect these principles, showing improved microstructure suitable for cell interaction and fluid transport.

In conclusion, the 1:8 acid treatment provides an effective, low-cost approach to enhance ESM microarchitecture, aligning with existing literature and supporting its use as a bioactive scaffold.

### 3.5. Cytotoxicity

The cytotoxicity of the ESM sample treated with a 1:8 acetic: citric acid ratio was evaluated using an extract-based method with L-929 fibroblast cells, in accordance with ISO 10993-5 and ISO 10993-12 standards. The membrane was sterilized by gamma irradiation at 25 kGy and confirmed sterile following the Vietnamese Pharmacopoeia V. For extraction, samples were immersed at a ratio of approximately 3 cm<sup>2</sup>/mL of surface area of culture medium, as recommended by ISO 10993-12.

MTT assay was used to determine cell

viability under aseptic conditions. The negative control consisted of untreated L-929 cells (cell-only), while the positive control was 20% DMSO. The treated ESM group exhibited Relative Growth Rate (RGR) values ranging from 92% to 97%, significantly exceeding the 70% threshold for cytotoxicity classification. In contrast, the positive control group showed RGR values between 20% and 23%, confirming the assay's sensitivity and reliability.

These findings strongly indicate that the processed ESM is non-cytotoxic and possesses excellent *in vitro* biocompatibility. The high RGR suggests that the acid treatment and freeze-drying processes did not produce harmful residues. Overall, the result supports the biosafety and potential biomedical applicability of the treated ESM, particularly as a scaffold for cell culture and tissue engineering.

## 4. CONCLUSION AND IMPLICATIONS

In summary, this study demonstrated that controlled acid treatment and freeze-drying enhanced the physicochemical and biological properties of chicken eggshell membrane (ESM), improving its hydrophilicity, porosity, and structural performance. The treated ESM exhibited excellent cytocompatibility with fibroblast cells, supporting its potential as a low-cost, waste-to-value biomaterial for applications such as wound dressings and soft tissue scaffolds.

Nevertheless, some limitations should be acknowledged. The scope of the present work was restricted to a limited set of acid ratios, and no systematic optimization strategy was employed. In addition, the study did not incorporate *in silico* modeling approaches that could help reduce unnecessary experimental conditions and provide predictive insights for comparison with *in vitro* results. Furthermore, mechanical properties such as

tensile strength, elasticity, and degradation rate were not investigated, which are crucial parameters for biomedical translation.

Despite these limitations, the current findings provide a strong foundation for further research. Future work should integrate computational modeling with

experimental validation, expand the evaluation of physicochemical and mechanical properties, and explore scalable processing strategies to accelerate the translation of ESM into biomedical applications.

### **Author contributions and authors' declaration**

*Thi Thanh Lan Le and Viet Hoang Le:* Conceptualization, methodology design, experimental supervision, final manuscript revision

*Minh Tien Nguyen:* Data analysis, writing – original draft, visualization

*Thi Hong Lien Nguyen, Huynh Tan Tran, and Kieu My Nguyen:* Material preparation, experimental procedures, data collection

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All authors have read and approved the final version of the manuscript. The authors declare that this manuscript was reviewed with the assistance of an artificial intelligence (AI) tool, limited to proofreading and grammatical correction. All scientific content, analyses, and interpretations are entirely the work and responsibility of the authors.

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## Note

The authors declare no competing interests.

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# NGHIÊN CỨU THU NHẬN VÀ BIẾN TÍNH MÀNG VỎ TRỨNG GÀ ĐỊNH HƯỚNG ỨNG DỤNG TRONG Y SINH HỌC

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**Tóm tắt:** Màng vỏ trứng (ESM) là phế phẩm tiềm năng từ ngành công nghiệp chế biến thực phẩm, có thể được thu gom dễ dàng với số lượng không hạn chế. Nghiên cứu này khảo sát quy trình thu nhận và biến tính ESM bằng hỗn hợp acid acetic : acid citric nhằm cải thiện các đặc tính vật lý và đánh giá tiềm năng ứng dụng trong y sinh học. Phương pháp biến tính này cũng không đòi hỏi trang thiết bị hiện đại, phù hợp với mọi phòng thí nghiệm. Các mẫu ESM được biến tính với hỗn hợp acid acetic : acid citric tỷ lệ từ 1:1 đến 1:10 và được xác định độ dày, độ trương, độ xốp và hình thái bề mặt. Kết quả thử nghiệm độc tính tế bào cho thấy ESM sau biến tính có tiềm năng sử dụng làm giá thể nuôi cấy tế bào. Dựa trên các kết quả thu được, ESM đã được biến tính với hỗn hợp acid acetic : acid citric tỷ lệ 1:8 hoàn toàn có tiềm năng ứng dụng đáng kể trong các lĩnh vực y sinh và dược học, đặc biệt là trong vật liệu phủ vết thương và kỹ nghệ mô in vitro.

**Từ khóa:** độc tính tế bào, khung nâng đỡ tế bào, kỹ nghệ mô in vitro, màng vỏ trứng, vật liệu sinh học, vật liệu y sinh

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## Ghi chú

Các tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

# MỘT HỆ THỐNG MÔ PHỎNG WEB THƯƠNG MẠI ĐIỆN TỬ (UPT-SHOPPING): TÍCH HỢP PAYPAL VÀ CHATBOT-AI NHẪM HỖ TRỢ NGƯỜI DÙNG THANH TOÁN VÀ PHẢN HỒI NHANH

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**Abstract:** Trong bối cảnh thương mại điện tử (TMĐT) Việt Nam tăng trưởng mạnh mẽ và hội nhập quốc tế, nhu cầu về các nền tảng bán hàng trực tuyến tích hợp các công nghệ tiên tiến đã phát triển mạnh mẽ. Bài viết này trình bày một nghiên cứu điển hình về việc thiết kế, phát triển và triển khai UPT-Shopping – một hệ thống TMĐT sử dụng Python Django. Nghiên cứu này là đưa ra một quy trình và hiệu quả của việc tích hợp hai dịch vụ chính: cổng thanh toán quốc tế PayPal và nền tảng trợ lý ảo Google Dialogflow. Nhóm tác giả phân tích các lựa chọn công nghệ, trình bày chi tiết kiến trúc hệ thống thông qua mô tả sơ đồ UML, làm rõ quy trình cấu hình và tích hợp Google Dialogflow, và thảo luận về những lợi ích cũng như thách thức trong việc xây dựng một hệ thống TMĐT nâng cao, hướng tới việc trải nghiệm người dùng một cách hiệu quả.

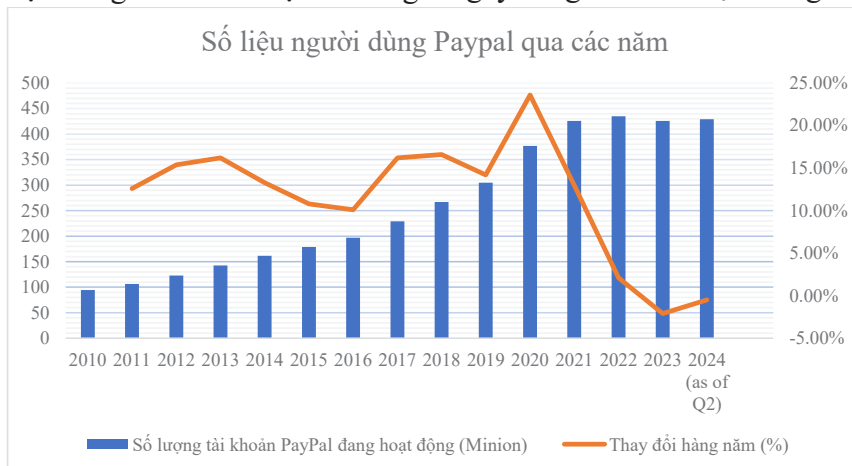
**Keywords:** Chatbot, Paypal, thanh toán quốc tế, thương mại điện tử, tích hợp hệ thống

## 1. GIỚI THIỆU

Trong những năm gần đây, thương mại điện tử đã và đang phát triển với tốc độ nhanh chóng trên phạm vi toàn cầu với tổng doanh thu bán lẻ trực tuyến toàn cầu ước tính đạt 6,33 nghìn tỷ USD vào năm 2024 và tiếp tục tăng hơn 6,86 nghìn tỷ USD vào năm 2025 (Anh, N. N., 2024). Trước xu thế phát triển mạnh mẽ này, các doanh nghiệp không chỉ cần chuyển đổi kịp thời từ mô hình kinh doanh truyền thống sang mô hình kinh doanh trực tuyến, mà còn phải chú trọng đến việc nâng cao mức độ hài lòng

của khách hàng và cải thiện hiệu quả trong công tác vận hành.

Bên cạnh, kỹ nguyên chuyển đổi số ứng dụng trí tuệ nhân tạo (Artificial intelligence – AI) vào thương mại điện tử đã trở thành xu hướng tất yếu (Long, D. H., & Dung, D. T. T., 2023). Các công nghệ AI – đặc biệt là ChatBot – đang ngày càng đóng vai trò quan trọng trong việc tương tác và hỗ trợ khách hàng, góp phần nâng cao trải nghiệm người dùng (Hình 1) và đáp ứng kỳ vọng ngày càng cao của thị trường.



Hình 1. Người dùng Paypal qua các năm

Từ đó, thị trường thương mại điện tử tại Việt Nam đang trở nên ngày càng cạnh tranh, buộc các doanh nghiệp phải không ngừng đổi mới để thu hút và đáp ứng sự hài lòng khách hàng. Cùng với việc thanh toán nhanh chóng và tiện lợi, nhu cầu thanh toán quốc tế và hỗ trợ khách hàng tức thì cũng được phát triển.

Vì các lý do nêu trên, việc tích hợp các tính năng thông minh như PayPal và Chatbot vào hệ thống thương mại điện tử là rất cần thiết (Lạng, N. T., Anh, T. T., Hiền, D. M., Liên, T. B., Quỳnh, N. & Trinh, D., 2022; Dialogflow., 2024). PayPal hiện là một trong những nền tảng thanh toán trực tuyến rộng rãi được chấp nhận lẫn nhau trên toàn cầu so với những phương thức khác như Skrill, Perfect Money, Payeer, Amazon Pay và Alipay, đây là lý do chính nhóm tác giả chọn nó và xem là đối tượng nghiên cứu về một phương thức thanh toán phổ biến trên các trang web mua sắm trực tuyến, có thể được sử dụng để chuyển tiền giữa các tài khoản khác nhau trên thế giới và được xem là an hơn so việc sử dụng trực tiếp thông tin thẻ tín dụng trên mạng, nhằm giúp doanh nghiệp trải nghiệm mua sắm thuận tiện, chuyên nghiệp cho người tiêu dùng ở bất cứ nơi nào. Bên cạnh, các nền tảng hỗ trợ chăm sóc khách hàng sử dụng bởi công cụ Chatbot như Google Dialogflow (UML., 2016) không chỉ có khả năng hoạt động liên tục 24/7 mà còn hiểu được ngôn ngữ tự nhiên, giúp giải đáp thắc mắc nhanh chóng và chính xác.

Trong nghiên cứu này với mục tiêu xây dựng một mô hình hướng dẫn cụ thể

## 2.2. Các thành phần tích hợp

### Phương pháp tích hợp Paypal

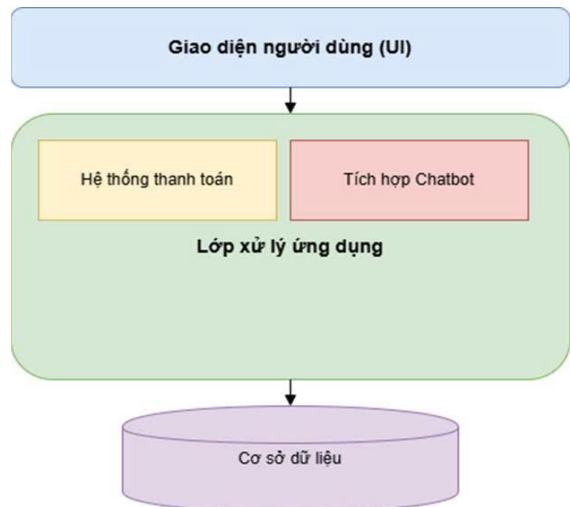
Sử dụng PayPal API (PayPal API., 2024) để tích hợp thanh toán vào hệ thống trên nền tảng Web.

để tích hợp các công nghệ hiện đại vào hệ thống thương mại điện tử, với tên gọi là UPT-Shopping. Nó được tích hợp công thanh toán quốc tế PayPal và công cụ chatbot Google Dialogflow, hệ thống này dựa trên kiến trúc tổng thể và các quy trình hoạt động phần mềm bởi UML (Trung, T. T. H., 2023).

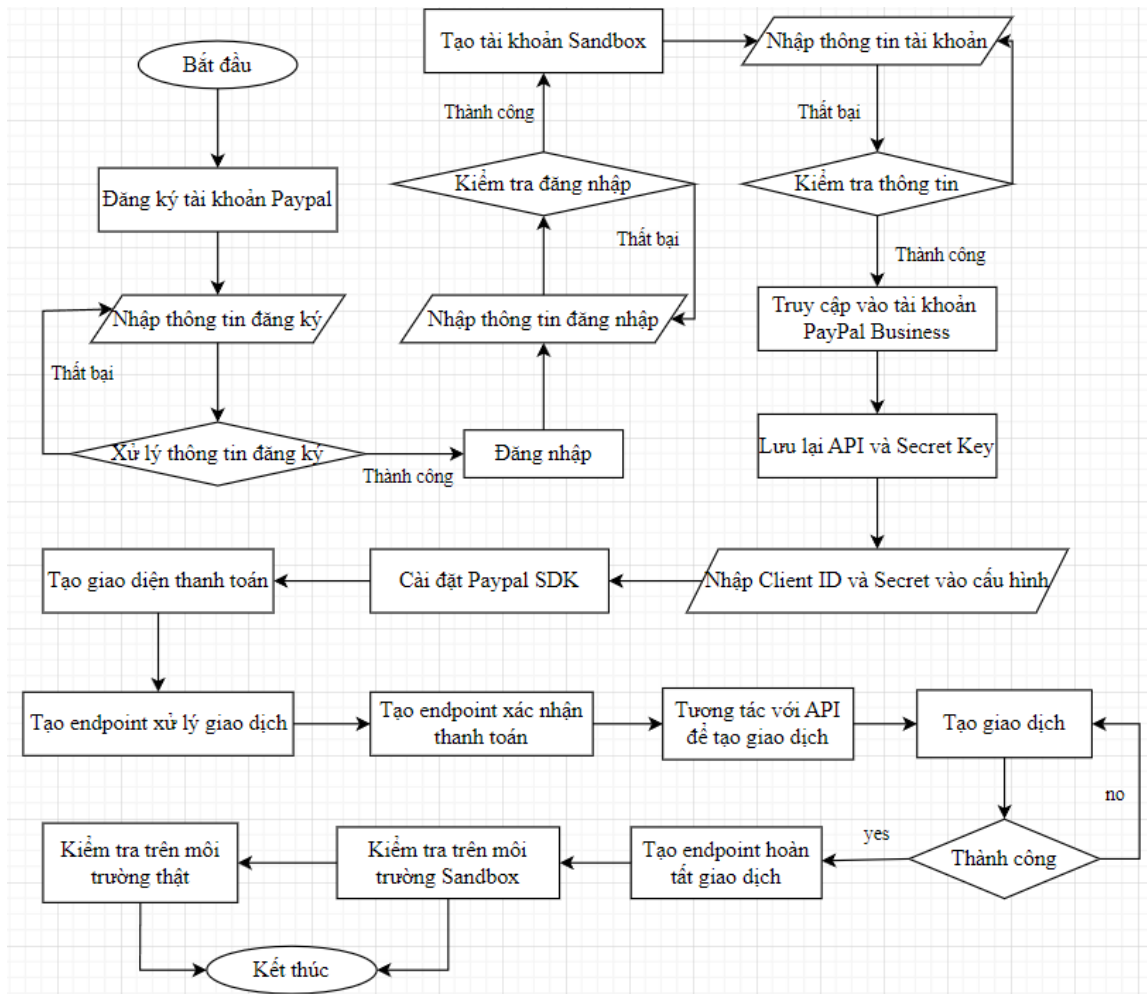
## 2. PHƯƠNG PHÁP NGHIÊN CỨU

### 2.1. Kiến trúc hệ thống

Để triển khai hệ thống một cách có hệ thống và hiệu quả, nghiên cứu này đã xây dựng quy trình tích hợp dựa trên các công nghệ đã lựa chọn. Kiến trúc hệ thống (Hình 2) thể hiện tổng thể cấu trúc hệ thống, các luồng dữ liệu và mối liên hệ giữa các thành phần chính như Giao diện người dùng, Lớp xử lý ứng dụng (bao gồm Hệ thống thanh toán và Tích hợp Chatbot), Cơ sở dữ liệu.



**Hình 2. Kiến trúc hệ thống**



Hình 3. Lưu đồ quy trình phương pháp tích hợp Paypal

Quy trình tích hợp PayPal (Hình 3) vào hệ thống bán hàng thông minh trên nền tảng Web được thực hiện qua nhiều bước, như sau:

**Bước 1:** Thiết lập tài khoản PayPal Business và tạo tài khoản Sandbox để thử nghiệm giao dịch.

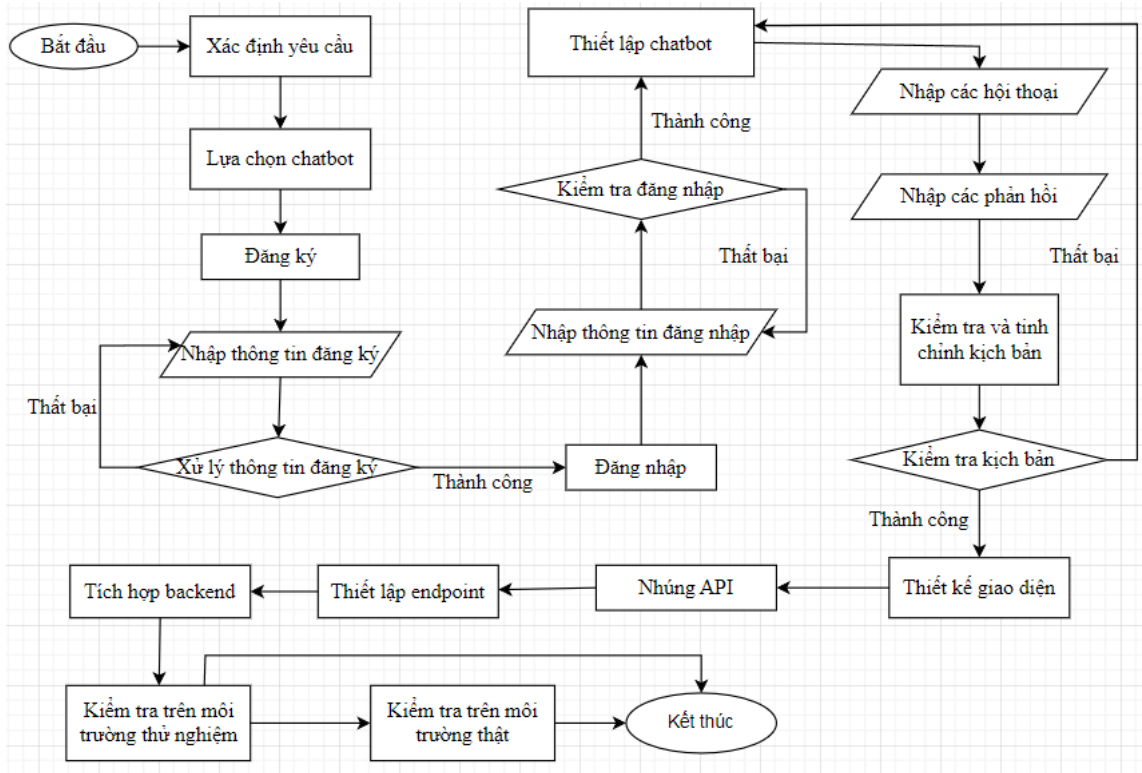
**Bước 2:** Lấy thông tin API từ trang chủ Paypal gồm Client ID và Secret Key nhập vào tệp cấu hình của dự án. Sau đó, cài đặt SDK của PayPal để tận dụng được tối đa các công cụ và tài nguyên. Tích hợp nút thanh toán PayPal vào giao diện trang web bằng cách sử dụng JavaScript SDK (JavaScript SDK., 2025), tạo ra trải nghiệm thanh toán trực quan cho người dùng. Trên máy chủ, thiết lập các endpoint để nhận yêu cầu thanh

toán và tương tác với API của PayPal để tạo giao dịch. Sau khi gửi yêu cầu tạo giao dịch, quy trình sẽ kiểm tra giao dịch có thành công hay không. Nếu giao dịch thành công, tiếp tục với bước tiếp theo. Ngược lại, trở lại bước “Tạo giao dịch”

**Bước 3:** Thiết lập endpoint để xác nhận và hoàn tất giao dịch, đảm bảo việc thanh toán được hoàn tất. Kiểm tra trên môi trường Sandbox để phát hiện và khắc phục các lỗi trước khi chuyển cấu hình từ Sandbox sang môi trường thời gian thực.

### Phương pháp tích hợp ChatBot

Sử dụng API của chatbot (Hình 4) để tích hợp vào trang Website. Tùy chỉnh chatbot để đáp ứng các câu hỏi thường gặp và yêu cầu hỗ trợ từ người dùng.



**Hình 4. Lưu đồ quy trình phương pháp tích hợp Chatbot**

*Bước 1:* Lựa chọn nền tảng ChatBot phù hợp như Google Dialogflow để triển khai trong hệ thống.

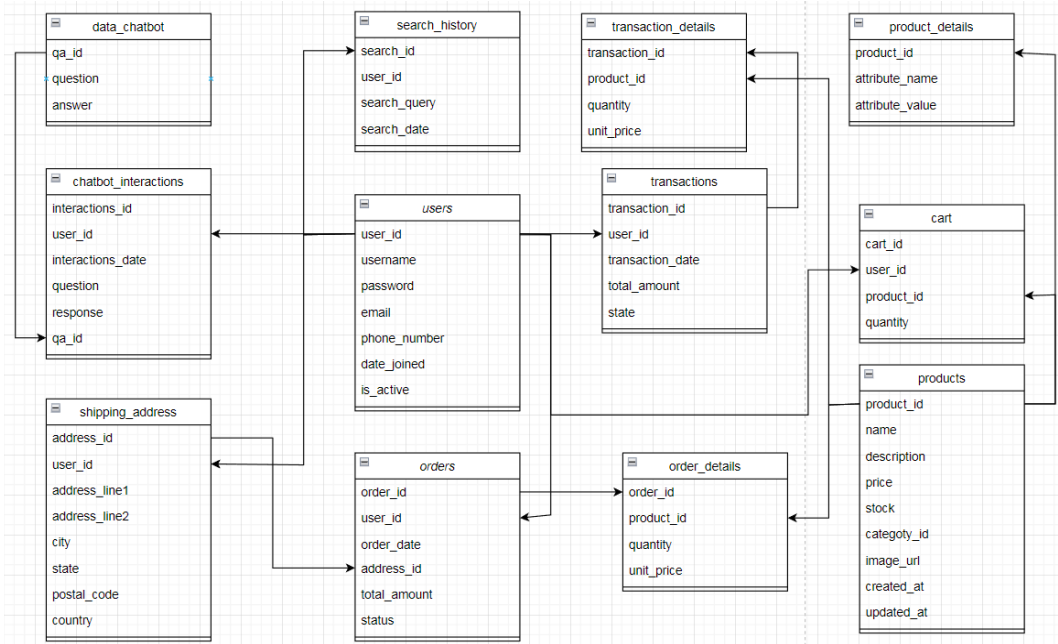
*Bước 2:* Thực hiện tạo và cấu hình Chatbot bao gồm việc đăng ký tài khoản và thiết lập Chatbot với các thông tin cơ bản như tên và ngôn ngữ. Trong bước này, thiết lập các kịch bản hội thoại bằng cách cấu hình ý định (intents) và phản hồi (responses) tương ứng. Sau đó, tiến hành kiểm thử trực tiếp trên nền tảng để đảm bảo chatbot có thể hiểu và xử lý đúng các tình huống cơ bản.

*Bước 3:* Tích hợp ChatBot vào giao diện Website bằng cách sử dụng đoạn mã nhúng (iframe) hoặc API do nền tảng cung cấp. Giao diện chatbot được thiết kế sao cho đồng bộ trong hệ thống trên nền tảng Web. Đồng thời, cấu hình các endpoint cần thiết để chatbot có thể tương tác với hệ thống backend để truy xuất và xử lý thông tin.

### 2.3. Cơ sở dữ liệu (CSDL)

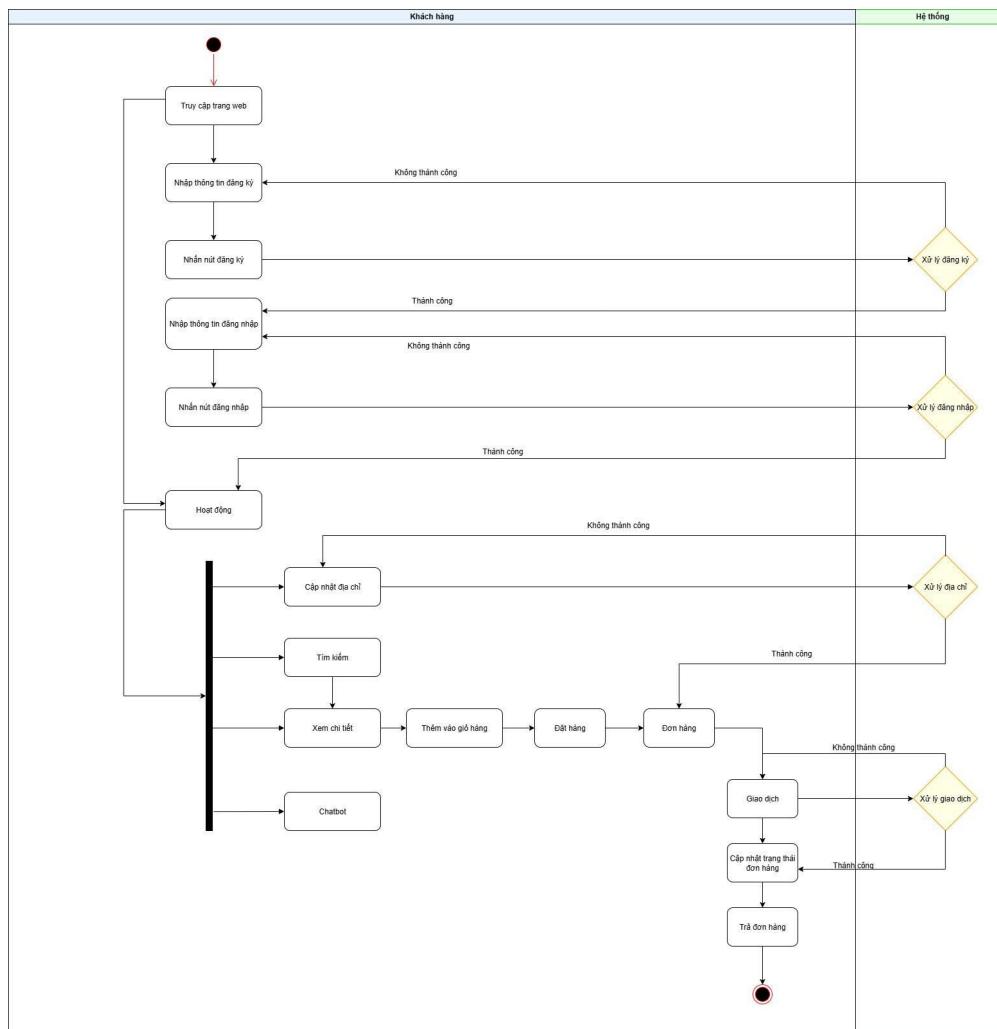
Để xây dựng hệ thống thông minh trên nền tảng Web tích hợp PayPal và chatbot, cần thiết kế hệ cơ sở dữ liệu. Trong nghiên cứu này, sử dụng ngôn ngữ lập trình Python kết hợp hệ quản trị cơ sở dữ liệu nguồn mở MySQL (MySQL., 2021) để thiết kế CSDL và phân tích các luồng xử lý của hệ thống. Hai bảng chính (chatbot\_interactions, data\_chatbot) được mô tả trong sơ đồ quan hệ trong hệ cơ sở dữ liệu tại (Hình 5).

- chatbot\_interactions: Lưu trữ các tương tác của người dùng với chatbot, được xác định bằng mã tương tác duy nhất (interaction\_id). Bảng này liên kết với bảng dữ liệu chatbot qua khóa ngoại interaction\_id, giúp cải thiện hiệu suất của chatbot.
- data\_chatbot: Chứa các câu hỏi và câu trả lời, được xác định bằng mã duy nhất (qa\_id), giúp quản lý nội dung phản hồi của chatbot.



Hình 5. Sơ đồ quan hệ giữa các bảng trong cơ sở dữ liệu

## 2.4. Quy trình hoạt động hệ thống của người dùng



Hình 6. Quy trình hoạt động hệ thống của người dùng

Quy trình hoạt động hệ thống của người dùng (Hình 6) gồm các bước sau:

**Bước 1:** Người dùng tiến hành nhập thông tin để đăng ký tài khoản. Hệ thống sẽ tiếp nhận và xử lý dữ liệu đăng ký. Nếu đăng ký không thành công sẽ hiển thị thông báo lỗi và yêu cầu người dùng nhập lại. Tuy nhiên, tại bước này, người dùng vẫn có thể sử dụng một số chức năng cơ bản của hệ thống như tìm kiếm và xem thông tin sản phẩm, và không tương tác các chức năng chính trong hệ thống.

**Bước 2:** Người dùng sử dụng tài khoản đăng ký tại phần đăng nhập để truy cập vào hệ thống thương mại điện tử để tương tác với các chức năng chọn và đặt hàng sản phẩm, tìm kiếm sản phẩm khác, ...

**Bước 3:** Khi người dùng xác nhận đơn hàng, hệ thống sẽ tự động khởi tạo đơn và chuyển sang bước thanh toán trực tuyến và sau đó theo dõi trạng thái đơn hàng cho đến khi nhận hàng trực tuyến.

**Bước 4:** Người dùng sử dụng chatbot đã được tích hợp trên hệ thống để được hỗ trợ chăm sóc khách hàng.

### 3. CÀI ĐẶT VÀ ỨNG DỤNG

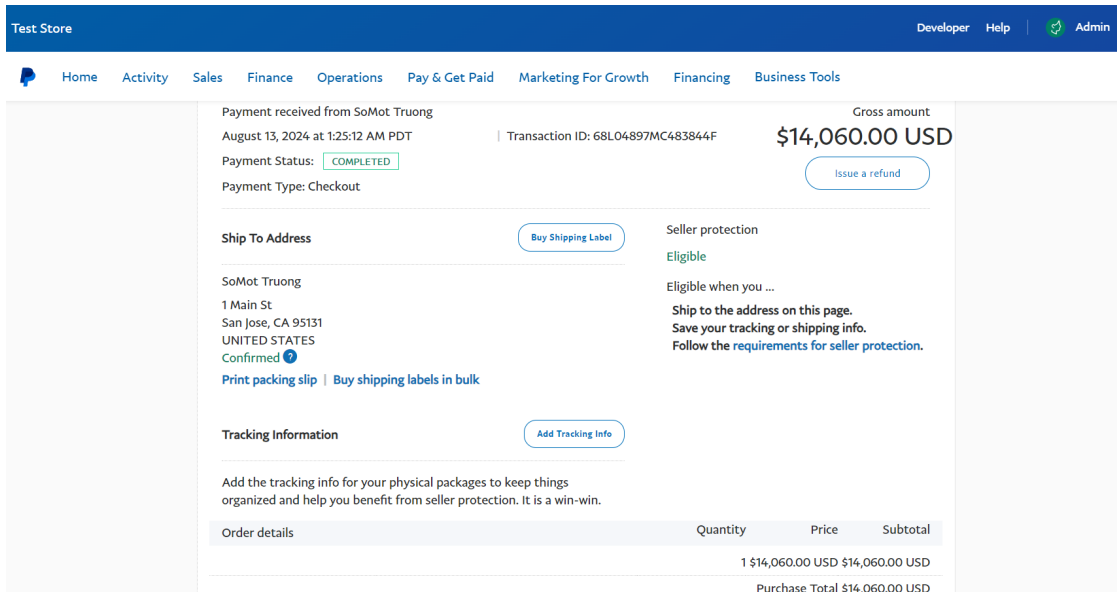
Mã nguồn của hệ thống UPT-Shopping tại GitHub: <https://github.com/NXTtruong/UPT-Shopping.git>.

#### 3.1. Nền tảng Django

Hệ thống được phát triển dựa trên nền tảng Django với ngôn ngữ lập trình Python. Các thành phần cốt lõi như mô hình dữ liệu, chức năng xử lý, giao diện hiển thị, URLs và giao diện quản trị đã được thiết lập. Kiến trúc này dựa trên mô hình MVT (Model-View-Template) của Django.

#### 3.2. Tích hợp PayPal

Việc tích hợp PayPal là một trong những nền tảng thanh toán quốc tế trực tuyến (Hình 7) phổ biến ở khía cạnh chuyên môn công nghệ phần mềm là frontend và backend. Khía cạnh người dùng, PayPal JavaScript SDK được sử dụng để hiển thị phương thức thanh toán và khởi tạo giao dịch. Bên cạnh, hoạt động tại máy chủ, các API endpoint được xây dựng trên Django. Hệ thống cũng hỗ trợ cấu hình Webhook/IPN để nhận thông báo giao dịch bất đồng bộ từ PayPal.

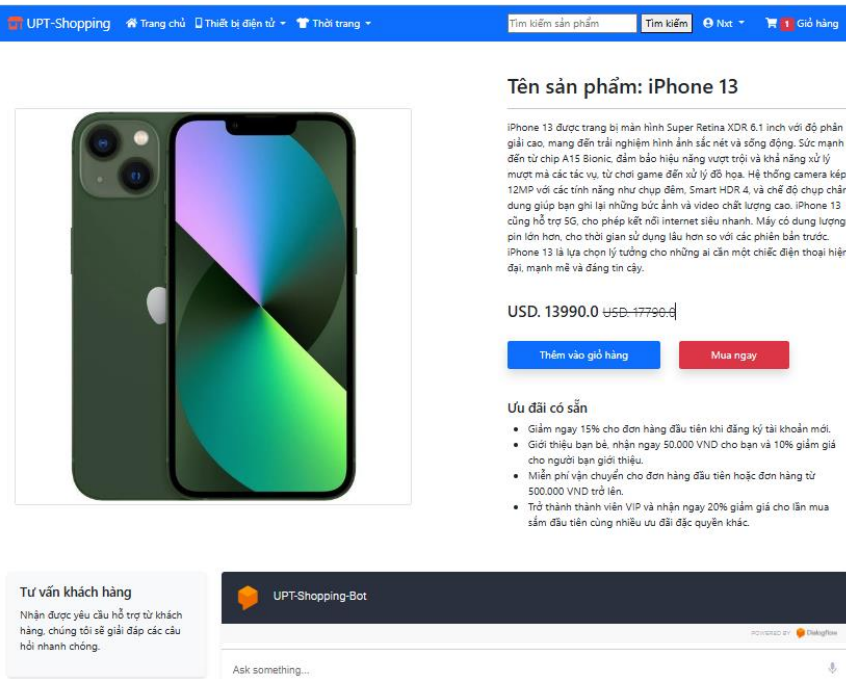


Hình 7. Thanh toán quốc tế trực tuyến Paypal

### 3.3. Tích hợp Google Dialogflow

Chatbot của hệ thống được xây dựng dựa trên nền tảng Google Dialogflow, hỗ trợ xử lý ngôn ngữ tự nhiên (Natural Language Programming – NLP) (Le, D. P. C., Wang, D., & Le, V. T., 2024) và tích hợp dễ dàng với giao diện người dùng. Quy trình tích hợp bắt đầu bằng việc thiết kế hội thoại trên giao diện Dialogflow thông qua việc định nghĩa ý định người dùng (Intents), thực thể

cần trích xuất và phản hồi của hệ thống. Các mẫu câu huấn luyện đa dạng được cung cấp từ Intent nhằm cải thiện khả năng trả lời của chatbot thân thiện và chính xác hơn. Sau khi thiết kế hoàn tất, tính năng Web Demo của Dialogflow được kích hoạt để cho phép tích hợp trực tiếp vào hệ thống. Mã iframe do Web Demo cung cấp được nhúng vào file template HTML (HTML., 2025) trong hệ thống UPT-Shopping (Hình 8).



Hình 8. Ứng dụng UTP-Shopping

### 4. KẾT LUẬN

Ứng dụng UPT-Shopping là một hệ thống mô phỏng một trang Web thương mại điện tử được gọi xem là thông minh vì đã được triển khai tích hợp thanh toán quốc tế trực tuyến tích hợp PayPal và hỗ trợ khách hàng thông qua chatbot Dialogflow trong hệ thống với kết quả thử nghiệm cho thấy quy trình thanh toán đúng và hỗ trợ trao đổi trò chuyện ổn định.

Vì vậy, nghiên cứu này sử dụng các công nghệ phổ biến như Django, PayPal và Dialogflow đã đóng góp không nhỏ về mặt chuyên môn công nghệ phần mềm nói chung và phát triển một hệ thống trên nền tảng Web thử nghiệm nói riêng cùng với các tài liệu tham khảo đã làm sáng tỏ và nhận định đúng những quan điểm đã nêu trong bài báo khoa học này.

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### **Ghi chú**

Các tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

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# AN E-COMMERCE WEB SIMULATION SYSTEM (UPT-SHOPPING): INTEGRATING PAYPAL AND CHATBOT-AI TO SUPPORT USERS IN PAYMENT AND QUICK RESPONSE

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**Abstract:** *In the context of strong growth and international integration of Vietnam's e-commerce, the demand for online sales platforms integrating advanced technologies has grown strongly. This article presents a case study on the design, development and implementation of UPT-Shopping - an e-commerce system using Python Django. This study presents a process and efficiency of integrating two main services: the international payment gateway PayPal and the virtual assistant platform Google Dialogflow. The authors analyze technology options, present detailed system architecture through UML diagrams, clarify the configuration and integration process of Google Dialogflow, and discuss the benefits and challenges in building an advanced e-commerce system, aiming at an effective user experience.*

**Keywords:** *Chatbot, e-commerce, international payment, Paypal, system intergration*

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## Note

The authors declare no competing interests.

# NAVIGATING TASK SELECTION: STRATEGIES AND CHALLENGES FOR VIETNAMESE EFL LECTURERS IN MIXED-LEVEL CLASSES

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**Abstract:** *This study aims to explore the strategies and challenges Vietnamese EFL lecturers faced when selecting tasks for mixed-level classes at university level. Adopting an Activity Theory perspective, it reports on data collected from semi-structured interviews with eight lecturers at a Vietnamese university in the Mekong Delta. Results indicate that lecturers used different strategies when selecting tasks such as task differentiation, scaffolding, input modification, and interactional strategies in response to learner diversity. Despite these efforts, they encountered big challenges related to contextual constraints (e.g., time limitation and rigid curriculum), teacher capacity (e.g., preparation demands and fairness concerns), and student factors (e.g., low autonomy and dependence on AI tools). Accordingly, the study highlights the complexity of task selection in diverse EFL settings and calls for institutional support as well as teachers' training. It also contributes insights into inclusive task design and pedagogical decision-making in higher education.*

**Keywords:** *challenges, higher education, mixed-ability instruction, strategies, task selection*

## 1. INTRODUCTION

In the context of English as a Foreign Language (EFL) education, in Vietnam and around the world, mixed-ability classes pose a common issue. The fact that EFL teachers across the globe often have students with diverse levels of language proficiency in their classrooms not only complicates planning but also affects the nature of language instruction (Gustiani, 2018). Varied learner ability is a major challenge in imparting effective instruction, as it compels teachers to cater to plethora of linguistic needs while ensuring inclusion and motivation in their instruction (Tomlinson, 2014).

Task selection is a critical factor in this regard. Effective tasks need to be based on a balance between accessibility and challenge, that is all students, no matter how good or bad they are at the subject, need to be able to participate in learning (in ways that are significant) (Willis & Willis, 2013). Brown (2014) stresses that effectively designed tasks facilitate inclusivity since

they encourage levels of engagement among varying proficiency ranges.

Its relevance in Vietnam is apparent by the common observation of multi-proficiency classes when it comes to EFL instruction (Harmer, 2015). Vietnamese teachers frequently encounter the challenge of creating or selecting activities that cater for learners at two ends of the proficiency continuum (Grant & Nguyen, 2017). It is required to consider not only linguistic differences but also group effect, learner's motivation and effectiveness of task for language learning. Moreover, Al-Mohammadi (2015) also emphasizes the significance of an adequate level of difficulty. The tasks should not be too easy in order to not bore advanced group and they should not be too difficult in order not to discourage lower ones (Willis & Willis, 2013).

Although the necessity of task selection for working in hetero-geneous classrooms is widely recognized, it seems that empirical

studies on teachers' "doing" are not common. Although the literature on this practice (e.g., Gustiani, 2018; Harmer, 2015) describes the general challenges of mixed-ability groups, it gives no insight into how teachers "tune" a task to make it accessible to different learners. While some researchers (e.g., Brown, 2014; Harmer, 2015) recommend task-based language learning in which tasks are tailored to learners' needs, interests and backgrounds, there is little understanding how such a proposed approach can be applied in practice in Vietnamese tertiary contexts. This study, therefore, addresses this gap by investigating the strategies and challenges Vietnamese EFL lecturers encounter in task selection for mixed-level university classrooms. The study is guided by the following research questions:

i. What strategies do Vietnamese EFL lecturers use when selecting tasks for mixed-level classes?

ii. What are Vietnamese EFL lecturers' perceptions of the challenges involved in task selection for mixed-level classes?

## **2. LITERATURE REVIEW AND RESEARCH METHODS**

### **2.1 Task Selection and Strategies for Task Selection in EFL Classes**

Task selection is the decision making process by which teachers select instructional tasks that support learning goals, cater for different proficiency levels, and target curricular goals. In EFL learning situation, it means when measuring the quality, it is concerned primarily with the appropriateness of tasks to the basic skills of the language, the engagement of the learners, and how it fits to the cultural and institutional context (Ellis, 2003).

In mixed-level classes, the choice of a task is very important. To do this, teachers need to control task accessibility and difficulty, to make sure all students can participate

meaningfully (Nunan, 2004). This is where the complexity of tasks, cognitive load and differentiation all needs careful thought.

Furthermore, in mixed level classes, the task selection, taking into account different pupils' abilities and learning need, is much more complicated. One of the commonly employed strategies of dealing with this complexity inherent to learning materials is tiered tasks, in which tasks are tiered to different complex levels with common theme or instructional objective. For example, less proficient learners can carry out simplified or limited vocabulary building activities, with more advanced learners being engaged in more analytical or communicative tasks such as debates or presentations (Tomlinson, 2014). Another common one is scaffolding (i.e., teachers provide structured supports). It is believed that scaffolding can be reduced as learners become more proficient and independent (Wood et al., 1976).

Various models of grouping including flexible grouping are often used to facilitate differentiated instruction. Teachers can assign students to small groups based on ability, interest, or groupings can be random to develop collaborative learning and peer support. This approach exposes students to different perspectives and fosters inclusive participation (Kingore, 2004; Tomlinson, 2014). Another approach is task-based differentiation, in which the work given to students is designed to play to their individual strengths or address their noted weaknesses, while still keeping an eye on clear learning goals. For example, one group could focus on pronunciation, and another, on writing - if these are the same topic area (Slavin, 2014).

Designing tasks that simulate real-life situations such as role-plays, problem-solving scenarios, or interactive simulations also enhances relevance and

learner engagement. These authentic tasks encourage students to use language meaningfully and relate their classroom learning to practical contexts (Nunan, 2004). Alongside these strategies, formative assessment plays a critical role in informing task selection. Continuous monitoring of student progress allows teachers to adjust tasks in response to learners' needs and ensure that they remain developmentally appropriate (Black & Wiliam, 1998).

## **2.2 Challenges in Task Selection for EFL Classes**

EFL lecturers face multiple challenges in selecting tasks, particularly in mixed-ability classrooms characterized by diverse linguistic and learning needs. A primary difficulty lies in balancing the needs of learners at different proficiency levels (Guerrettaz & Johnston, 2013; Onyishi & Sefotho, 2020). Tasks must support less proficient students without demotivating more advanced ones. While differentiation is essential, it is often time-intensive and may not align with institutional requirements (Alsubaie, 2015; Afshai et al., 2019).

Maintaining an optimal level of task complexity is another challenge. Tasks that are too difficult can lead to disengagement, while overly simple tasks may fail to promote meaningful learning (Sang & Van Loi, 2023). Institutional and resource-related constraints compound these issues. Many lecturers rely on fixed textbooks that may not accommodate diverse learning needs. Additionally, large class sizes and rigid curricula limit opportunities for personalized instruction (Hien & Loan, 2018). Time limitations are also a major concern. Designing differentiated tasks requires planning and creativity, but lecturers often face heavy workloads that restrict preparation time (Willis & Willis, 2013).

Cultural factors further complicate task selection. Vietnamese classrooms

often adhere to traditional norms that favor teacher-centered instruction. These norms may conflict with communicative and task-based approaches, requiring teachers to invest additional effort in contextual adaptation (Sang & Van Loi, 2023). Moreover, learner motivation and autonomy can be inconsistent. Engaging students through relevant and authentic tasks is crucial, but not always easy to achieve (Alwy, 2025). Promoting self-regulated learning is particularly challenging when students are unfamiliar with independent or exploratory approaches (Willis & Willis, 2013).

## **2.3 Cultural and Contextual Influences on Task Selection**

Cultural and contextual factors play a critical role in shaping task selection in EFL instruction. As Ellis (2003) notes, effective tasks must reflect both learner proficiency and the specific realities of the teaching environment. In Vietnam, for instance, teaching practices are deeply influenced by cultural expectations. Educators often view language teaching as closely linked to moral and cultural education. As Hoa and Vien (2018) observe, this can result in an emphasis on surface-level cultural themes, potentially limiting deeper intercultural learning. Additionally, traditional teacher-centered norms may hinder the adoption of more interactive or student-led task approaches.

Contextual constraints also limit instructional flexibility. Vietnamese universities often prioritize exam preparation and standardized assessments, leading lecturers to select tasks that align with testing requirements rather than communicative goals (Cao, 2018). This focus restricts the use of authentic, student-centered activities.

Pedagogical frameworks further influence task selection. While approaches like Task-Based Language Teaching encourage authentic language use, implementation in

Vietnamese contexts is hindered by rigid curricula, limited resources, and entrenched teaching habits (Richards & Rodgers, 2014).

## **2.4 Research Methods**

### **2.4.1 Research Design**

This study adopts a qualitative research approach to explore how Vietnamese EFL lecturers navigate task selection in mixed-level classes. A qualitative approach is preferred for this study as it allows for an in depth examination of lecturers' beliefs, decision making and teaching (Patton, 2002). Unlike methods utilizing quantitative measures, which limit themselves to measurable variables, qualitative research attempts to represent the context and interpretive features of the practices involved in teaching, and thus provides a richer conception of what actually goes on in classrooms.

### **2.4.2 Research Participants**

The study involved eight EFL lecturers from a university in the Mekong Delta, Vietnam, all of whom had experience teaching English in mixed-level university classes. Participants were selected purposively based on their relevant teaching backgrounds and familiarity with task selection and adaptation for learners with diverse proficiency levels. All had current or prior experience in such settings and agreed to participate in semi-structured interviews.

The sample included seven female and one male lecturer, representing variation in age, teaching experience, academic background, and areas of specialization within English language teaching. While some had extensive experience managing heterogeneous classrooms, others were relatively new to task adaptation in mixed-level contexts. This diversity aligned with Creswell's (2013) recommendation for capturing a wide range of perspectives to enhance the depth and richness of qualitative data.

### **2.4.3 Research Instrument**

This study employed semi-structured interviews to explore how Vietnamese EFL lecturers selected tasks for mixed-level classes and the challenges they faced. This method allowed for consistency across key themes while offering participants flexibility to elaborate on their experiences. Semi-structured interviews are well-suited for examining complex pedagogical practices, balancing structure with the adaptability needed to probe deeper into participants' responses (Galletta, 2013; Kallio et al., 2016).

The interview protocol covered two main areas: lecturers' task selection strategies and the challenges encountered in implementation. It consisted of two sections including background information (age, gender, teaching experience, qualifications) and a core section on classroom practices in mixed-level settings. Open-ended questions and follow-up prompts encouraged detailed responses while maintaining a consistent structure (Mason, 2004).

Interview questions were informed by Skehan's (1998) task framework, focusing on linguistic complexity, cognitive demand, and communicative stress. This theoretical grounding supported a focused investigation of how lecturers navigate task design in diverse classrooms. The approach yielded rich insights into the strategies and constraints shaping task selection in Vietnamese EFL contexts.

### **2.4.4 Data Collection Procedure and Analysis**

To ensure clarity and validity of interview protocol, it was validated through a two-step process. An experienced EFL lecturer read through the questions initially, followed by a pilot interview with a lecturer outside the main sample of participants. Minor revisions were made in response to feedback to enhance clarity and flow. It

is important to mention that for its pilot, this study used the Vietnamese to allow fuller expression of pedagogical ideas, a language choice maintained for the main interviews to ensure participant comfort and depth of response (Creswell, 2012; Marschan-Piekkari & Reis, 2004).

Of the 15 lecturers invited, eight agreed to participate. Interviews were scheduled based on participant availability and held either online or in person. Each session lasted about 60 minutes, was conducted in Vietnamese, and followed ethical procedures, including signed consent and confidentiality assurances. With participant permission, interviews were audio-recorded and transcribed verbatim for analysis. The protocol included background questions and core items on task selection strategies and challenges, with open-ended prompts and follow-ups to elicit detailed responses.

As for data analysis, thematic analysis was used to identify recurring patterns in lecturers' responses, offering insight into their strategies and the challenges of task selection in mixed-level classrooms (Braun & Clarke, 2006). Following the six-phase process including familiarization, coding, theme development, review, definition, and reporting, the data were organized into main themes and subthemes capturing instructional practices and obstacles.

### **3. RESULTS AND DISCUSSION**

#### **3.1 Strategies Vietnamese EFL Lecturers Used for Task Selection in Mixed-Level Classes**

##### ***3.1.1 Task Adaptation***

Task adaptation emerged as a core strategy used by all participants ( $n = 8$ ) to manage the varied proficiency levels in their classrooms. Lecturers reported modifying tasks in terms of difficulty, format, and content through three main approaches including tiered tasks, task-based differentiation, and authentic task design.

Tiered tasks allowed students to engage with the same topic at varying levels of complexity. Participant L2 explained: "For shopping topics, I ask lower-level students simple ingredient questions, while higher-level students plan a party menu and assign tasks, requiring them to use more complex language and structures." L8 similarly noted: "I adjust exercises to fit the students' levels [...] simplifying for lower-level learners and making them more challenging for those with higher proficiency." Several lecturers structured tasks based on Bloom's Taxonomy. L1, for instance, explained: "If tasks are too easy, they're ineffective. But if they're too hard, they can overwhelm students. I structure tasks using Bloom's Taxonomy, starting with recognition, then explanation, and eventually application in real-life contexts." L6 shared a similar approach: "I begin by ensuring students understand the core concepts. Then I move to application and analysis-level exercises. I design activities in stages, starting with comprehension, followed by application, and progressing to analysis." These accounts align with the concept of tiered task design, which involves preparing parallel tasks at different complexity levels while maintaining a shared learning objective (Algozzine & Anderson, 2007; Subban, 2006; Tomlinson, 2014).

Task-based differentiation was also widely reported. L2 noted: "Many students struggle with listening, so I adapt tasks, starting with speaker identification, then using multiple-choice or fill-in-the-blank exercises, analyzing grammar, and finishing with a new passage using the same structures." L4 emphasized the need to consider learners' academic background, stating that: "I take into account whether students are in their first, second, third, or fourth year, especially in classes that mix year levels. Their learning styles, personalities, and proficiency levels vary by

age and experience.” These practices align with Subban (2006) and Tomlinson (2001), who argue that differentiated instruction provides equitable access while addressing learner diversity.

Authentic tasks were another prevalent strategy. L3 explained: “I often assign higher-level students roles as peer teachers or assistants. They explain content, present key points, and support others, helping them reinforce their own learning while assisting classmates.” L5 described a writing activity: “I assign a job application task where students write cover letters. After self-correcting errors, another group acts as recruiters, reviewing, giving feedback, and deciding whether to ‘hire’ the applicant.” Such tasks mirror real-world contexts, encouraging meaningful use of language and peer collaboration (Guariento & Morley, 2001; Richards, 2006; Willis, 1996).

It is obvious that these approaches reflect an adaptive pedagogy where tasks are aligned to both learner needs and communicative objectives. Authentic, tiered, and differentiated tasks help foster motivation and ensure meaningful participation across proficiency levels (Cameron, 2001; Kramsch, 1993; Nunan, 2004).

### **3.1.2 Scaffolding**

The findings show that all participants employed scaffolding to help students complete tasks effectively. It should be mentioned that six forms were identified including content, procedural, questioning, linguistic, visual, and modeling.

Content scaffolding involved sequencing material from simple to complex. To illustrate, L4 stated: “I believe the information should begin with the most basic and easy-to-understand points, and then gradually become more complex.” L7 added: “I organize topics to suit the learners. We start with familiar themes like

‘Family’ or ‘Jobs’ at the B1 level, and only later move to more abstract topics such as ‘The Environment’.”

Procedural scaffolding supported students by breaking tasks into steps. L4 explained: “I usually guide students step by step, especially with difficult lessons. I divide them into smaller parts so students don’t feel overwhelmed.” L2 elaborated: “Instead of starting with multiple-choice questions right away, I scaffold the task. First, students listen to identify who is speaking. Then they do a fill-in-the-blank activity, and only later move on to answering comprehension questions.”

The findings show that scaffolded questioning allowed adjustment of cognitive demand. L1 shared: “For lower-level students, I use simple questions like: ‘Imagine you are traveling home, what problems might you encounter before, during, and after the trip?’ They can use real-life experiences and basic sentence structures to respond.” L7 explained: “In discussions or quick assessments, I follow Bloom’s Taxonomy, starting with ‘What, When, Where’ questions before moving to ‘How’ and ‘Why’. This gradual increase in difficulty helps students reach the learning goal.”

Furthermore, linguistic scaffolding included sentence starters and simplified language. L2 explained: “I use the scaffolding method by giving students pre-made sentence structures for speaking practice.” L8 added: “For students with lower proficiency, I simplify complex questions and provide basic sentence patterns. Once they master those, I introduce more advanced structures.”

Regarding visual scaffolding, it involved mind maps, videos, and diagrams. L8, for instance, said: “When students struggle with new words, I use context, pictures, videos, or multimedia tools to help them

visualize and remember better.” In a similar vein, L1 shared: “I guide students to create mind maps to help them organize and recall information. For projects, I use diagrams to show the steps. In speaking tasks, the mind map might include suggested ideas to support practice.”

The lecturers also believed that modeling clarified expectations. L3 noted: “Students may go off track without clear expectations, so I provide model tasks, either from past students, my own demonstrations, or by having stronger students present first to guide their peers.”

From these perspectives, these findings align with Vygotsky’s (1978) who emphasize the value of scaffolding in bridging gaps in language proficiency (Gibbons, 2002; Grabe & Stoller, 2011; Walqui, 2006). Scaffolding enables learners to work within their zone of proximal development, the space between what they can achieve independently and what they can accomplish with appropriate guidance. Through tailored support, such as step-by-step instruction, strategic questioning, and modeling, teachers help students gradually develop the competence to complete tasks autonomously. This process fosters not only linguistic development but also cognitive and metacognitive growth, as learners are encouraged to engage with increasingly complex language structures and tasks over time. In this way, scaffolding serves both as a bridge to immediate task success and a foundation for long-term language proficiency and learner independence.

From these perspectives, this study resonates with Vygotsky’s (1978) stressing the importance of scaffolding to bridge language gaps (Gibbons, 2002; Grabe & Stoller, 2011; Walqui, 2006). Scaffolding allows individuals to operate within their zone of proximal development, which is the gap between what they can do

with help and what they can do on their own. By providing support (e.g., in the form of scaffolding, which is step-by-step instruction and strategic questioning and modelling), teachers support students in building the competence to do a task independently over time. This supports not only the linguistic but the cognitive, and metacognitive development of the learner as he or she is guided to interact with more and more complex language forms and tasks as they go along. In this respect, scaffolding acts as both a bridge to successful task performance and as a building block to long-term language acquisition and learner autonomy.

### ***3.1.3 Spaced Repetition and Vocabulary Recycling***

The findings show that five participants reported using spaced repetition and vocabulary recycling to enhance long-term retention. For instance, L1 stated: “I frequently repeat important vocabulary so that students can remember it better and use it more confidently.” Similarly, L8 added: “For students who struggle, I emphasize key words and repeat them multiple times to strengthen their memory.”

Lecturers also reintroduced vocabulary in new contexts. L1 explained: “Even when moving on to a new topic, I still revisit difficult words from earlier lessons, using them in different ways. This gives students another chance to process and remember them.” L4 shared: “I might introduce one synonym for a word today, and another the next day. That way, students connect different forms of the word and develop a richer vocabulary.”

These strategies are consistent with cognitive research on memory consolidation via multiple exposure, which suggests that learning is strengthened when learners revisit material over spaced intervals (Nation, 2013; Schmitt, 2000; Tharp &

Gallimore, 1988). Repeated exposure to words in various tasks promotes the formation of form-meaning relationships and retention in vocabulary learning. Reusing vocabulary in various contexts also prompts students to process the words deeply, leading to a deeper understanding of meaning, to noticing collocates and to productive use of words in authentic communication. Such instruction advances receptive and productive dimensions of vocabulary and enhances subsequent language development (Ellis, 2003; Kang, 2016; Webb, 2007).

### ***3.1.4 Communication Strategies, Interactional Support, and Input Modification***

Most lecturers (n = 7 out of 8) used a combination of communication strategies, interactional scaffolding, and input modification to ensure clarity and engagement in mixed-level classes.

It is reported that communication strategies included simplification and L1 use. L1 noted: “If a textbook uses unfamiliar terms, like ‘gist’ instead of ‘main idea’, I replace it with simpler vocabulary so students can understand.” L5 added: “To make sure students understand terms like ‘task fulfilment’, I’ll explain the concept in Vietnamese. Once they grasp the meaning, they can apply it in practice even without long English explanations.” L8 stated: “In mixed-level classes, I use paraphrasing, negotiation of meaning, and give clear examples so that even lower-level students can follow and contribute.”

Moreover, interactional scaffolding was common. L3 shared: “After giving instructions, I often ask a student to restate the main task requirements in their own words.” L5 described: “Sometimes my instructions are long. If I sense confusion, I ask stronger students to explain them again, then turn to weaker students and ask, ‘So,

what exactly are we supposed to do?’”

Comprehensible input was another key concern. For instance, L1 noted: “When I give instructions, I make sure 70 to 80% of the students can understand the main points.” L7 emphasized: “The key is not to use complex language. Instructions need to be clear so learners know exactly what is expected of them.” Contextual input supported meaning. L1 explained: “I might give examples or show a video that uses the target vocabulary in a specific situation to help students understand how it works.” L4 added: “If a reading passage about whales confuses students, I’ll show them a video. Once they see real images, the text becomes easier to understand.”

These approaches are also in accordance with the sociocultural theory and the input hypothesis (Gibbons, 2002; Krashen, 1982; Sweller et al., 2019), emphasizing the role of interaction, scaffolding and comprehensible input for language learning. From a sociocultural stand point, peer support, clarification checks and modelling all contribute to a collaborative learning environment in which knowledge is constructed interpsychologically based on interaction. Meanwhile, Krashen’s input hypothesis highlights the need for language input that is slightly above the learners’ current level but still understandable. The use of simplified language, visual aids, and contextual examples helps make this input accessible, especially in mixed-level classrooms. Together, these strategies enhance student engagement, reduce cognitive overload, and ensure that instructional content remains within reach for learners with diverse language proficiencies.

## **3.2. Vietnamese EFL Lecturers’ Perceptions of Challenges in Task Selection for Mixed-Level Classes**

### ***3.2.1 Contextual Challenges***

Vietnamese EFL lecturers reported several contextual challenges, notably time constraints, curriculum rigidity, and student proficiency gaps. Time limitations often hindered scaffolding and step-by-step instruction. As L4 explained, “According to the curriculum, students must write an essay in one class, but scaffolding each step takes too long, leaving no time for actual writing before the session ends.” Similarly, curriculum constraints restricted lecturers’ ability to adapt textbook-based tasks, even when the content failed to engage students. L3 noted, “I can’t change topics because the syllabus requires sticking to textbook themes, which often makes tasks boring for students.” She added, “Students engage more in topics like Festivals, Fashion, or Food, but show less interest in themes like the environment or books which I can’t change due to syllabus constraints.” L4 shared a similar concern: “There are some tasks based on textbook topics that students don’t like. They even say so directly, but they still have to complete them because they are part of the required content.”

Varying proficiency levels posed further difficulties. L1 remarked, “High-level students handle tasks well, but lower-level ones struggle. I can’t always simplify or skip steps, as doing so repeatedly would hinder their progress.” L4 echoed this, stating, “The curriculum sets clear outcomes, but mixed proficiency levels make it hard to group students evenly and ensure effective discussion of the same task.”

These challenges reflect broader contradictions in the educational system, as interpreted through Engeström’s (2014) Activity Theory. The alignment between the subject (teacher), tools (tasks), rules (curriculum), and object (learning outcomes) is often disrupted. Time constraints, for instance, conflict with the pedagogical need for scaffolded instruction (Hammond, 2001), while rigid curricula inhibit responsive

task design tailored to student interest or proficiency (Graves, 2008; Tomlinson, 2001). The findings affirm prior studies highlighting the tension between mandated curricula and the autonomy needed for effective differentiation in EFL classrooms (Borg, 2006; Graves, 2008).

The challenge of addressing varying student proficiency levels is consistent with findings by Nation and Macalister (2010) and Tomlinson (2014), who note that tasks that are too advanced for some and too simplistic for others undermine engagement. While tiered tasks or differentiated instruction offer theoretical solutions, their practical implementation is hindered by institutional factors such as time constraints, insufficient training, and uniform assessment practices (Nation & Macalister, 2010; Ur, 1996). Uniform curricular expectations can also create unrealistic demands across proficiency levels (Black & Wiliam, 1998), contributing to inequity in instructional outcomes (Engeström, 2014; Fullan, 2007).

These contextual constraints highlight the need for systemic change. Flexibility in curriculum design, time allocation for differentiated instruction, and institutional recognition of learner diversity are crucial if EFL lecturers are to implement inclusive and effective task selection strategies (Harmer, 2015; Richards, 2017).

### ***3.2.2 Teacher-related Challenges***

Lecturers also reported teacher-related challenges, including difficulties in evaluating materials, time-intensive preparation, complexities of differentiation, uncertainty in assessing task difficulty, fairness in grading, and generational gaps in content relevance.

L1 highlighted the difficulty of evaluating online materials, stating that: “The challenge is to verify, evaluate, and analyze online materials to ensure they align with teaching goals. I have to consider how content affects

students' understanding and whether it suits their proficiency levels." L4 shared similar concerns: "The internet offers more resources, but not all of them are reliable or official. I'm not really confident in my ability to evaluate them properly."

Time constraints further complicated material selection and task design. L1 said, "I can't always create tasks myself, and evaluating available materials thoroughly takes time. It's better to use reliable sources, but finding them can be time-consuming." L3 added, "Designing effective tasks that meet instructional goals takes a lot of time and effort, from selecting materials to creating activities."

Differentiating within a single class was particularly demanding. L3 explained: "Having students at different levels in one class means I need to prepare various activities for different groups. It's not just about differentiating across classes but within the same classroom, which requires designing multiple exercises." Although many lecturers employed Bloom's Taxonomy, applying it in practice was complex. L4 noted: "I use Bloom's Taxonomy to classify activities, but sometimes what I see as recognition-level might feel like an application task to students. Likewise, something I view as application might require extra analysis from them."

Fairness in grading tiered tasks was another concern. L4 remarked: "Tiered tasks raise fairness concerns. I mean advanced students feel burdened with more work and question the benefits, making me doubt if my grading is truly fair."

Finally, the generational gap between lecturers and students made authentic task selection more difficult. L4 stated: "There's a generational gap. Gen Z students pick up trends instantly, while I might take a month to catch on. This makes it hard to include

topics that truly engage them."

These findings underscore the cognitive and emotional demands placed on teachers. Lack of confidence in evaluating digital resources highlights the need for professional development in digital literacy and pedagogical content knowledge (Guerrettaz & Johnston, 2013; Tomlinson, 2014). Task preparation, particularly when aiming for differentiated instruction, is time-consuming and often unsustainable under current workloads (Levy, 2008; Subban, 2006).

The practical difficulty of differentiation within a single classroom reflects findings by Tobin and Tippett (2014), who note that task variation requires instructional agility and collaboration. Without institutional support, this burden falls disproportionately on individual teachers (Kingore, 2004).

Lecturers' struggles with aligning task difficulty to learners' cognitive levels further support Vygotsky's (1978) argument that instruction must align with learners' zones of proximal development. Misjudging task difficulty can undermine learning by either overwhelming or underchallenging students (Brookhart, 2013).

Concerns around fairness in tiered tasks reflect a well-documented tension in differentiated instruction, balancing equity with perception of effort and reward (Brighton et al., 2005). Finally, generational disconnects in content selection affirm the need for ongoing engagement with learners' cultural and digital contexts to ensure authentic task relevance (Dornyei & Ushioda, 2011; Herrington et al., 2003).

### **3.2.3 Learner-related Challenges**

Learner-related challenges included motivation, autonomy, engagement, and academic integrity. Motivation varied across proficiency levels. L3 observed: "The learning attitude of high-achieving

students is sometimes not as positive as that of weaker students. It can be difficult to gain their attention and encourage them to participate in classroom tasks.” L4 added: “Weaker students tend to feel insecure, unmotivated, and have little self-confidence. Even with encouragement from me or their peers, progress is hard unless they put in effort themselves. Some students remain passive or even want to give up.”

Lack of autonomy was another key issue. L1 noted: “Higher-level students can usually search for information themselves, but lower-level students often don’t even know how to begin.” Fatigue and disengagement were also widespread. To illustrate, L4 explained: “Students often come to class tired and prefer quick, easy tasks. Even high-level students finish fast and favor efficient, straightforward activities.” Sharing the same view, L2 said: “Some students simply refuse to do anything. Even with group support and sentence patterns to follow, some respond by saying, ‘I don’t know anything.’”

Academic integrity was a growing concern, especially in relation to AI-generated responses. L2 stated: “Many students use ChatGPT for writing. I can usually tell by reading their work. They also rely on AI for speaking, which means they don’t actually practice. Then during exams, they don’t know what to say or write.” L5 added: “When students complete writing tasks, it’s hard to know if they’re doing the work themselves or relying on AI. That makes it difficult to judge whether my task selection is really effective.”

These challenges complicate the implementation of pedagogical strategies. While task-based differentiation and authentic task design are intended to motivate learners, their success depends on learners’ readiness to engage. High-achieving students may resist participation when tasks appear unchallenging, while low-achieving

students may withdraw due to fear of failure (Tomlinson, 2014; Reeve, 2012).

Learner autonomy, essential for differentiated instruction, was notably lacking among lower-level students. This reinforces findings by Little (1991) and Teng (2021), who argue that autonomy must be cultivated through structured guidance. Disengagement and fatigue limit the effectiveness of cognitively demanding strategies, such as interactional scaffolding and input modification, which rely on active learner participation (Sweller, 1988; Akanpaadgi et al., 2023).

The issue of academic integrity, particularly the use of AI tools, presents a contemporary challenge. While AI may support language learning, overreliance undermines the authenticity of student performance. These concerns align with recent literature (Kasneci et al., 2023), which highlights ethical concerns and instructional challenges posed by AI-assisted outputs.

#### 4. CONCLUSION AND IMPLICATIONS

The present study revealed that the Vietnamese EFL lecturers have applied a wide range of strategies to deal with mixed-level classrooms such as task adaptation (tiered tasks, differentiation, authentic tasks), scaffolding (content, procedural, linguistic, visual, modeling), communication strategies, spaced repetition, vocabulary recycling, and input modification. These are ways of scanning we employ as educators in the service of diverse student cohorts, to support inclusive learning.

However, the implementation of these strategies was hindered by certain challenges including contextual constraints, time limitations, rigid curriculums, and diverse proficiency levels. Additionally, teacher-related challenges were found which comprised low skills in differentiation, time-consuming preparations, fairness issues and challenges to find authentic

content. Student-related obstacles included low motivation, limited autonomy, fatigue, and reliance on AI tools.

The findings underscore the need for greater institutional support (e.g., flexible curricula, targeted training, and professional development) to help lecturers implement effective, differentiated instruction. Promoting student responsibility

and digital literacy is also key to ensuring task effectiveness and academic integrity.

This study was limited to one university in the Mekong Delta and relied solely on lecturer interviews. Future research should include more diverse contexts, integrate classroom observations and student input, and explore the long-term impact of specific strategies like scaffolding and tiered tasks.

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# CHIẾN LƯỢC SỬ DỤNG VÀ THÁCH THỨC GẶP PHẢI TRONG VIỆC LỰA CHỌN CÁC HOẠT ĐỘNG GIẢNG DẠY TIẾNG ANH CỦA GIÁNG VIÊN TRONG LỚP HỌC ĐA TRÌNH ĐỘ BẬC ĐẠI HỌC

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**Tóm tắt:** Nghiên cứu này nhằm tìm hiểu các chiến lược được áp dụng và những thách thức mà giảng viên tiếng Anh tại Việt Nam gặp phải khi lựa chọn các hoạt động giảng dạy trong các lớp học bậc đại học có sự chênh lệch về trình độ ngôn ngữ. Dưới góc tiếp cận của Thuyết Hoạt Động, nghiên cứu sử dụng phương pháp định tính, thu thập dữ liệu thông qua phỏng vấn bán cấu trúc với tám giảng viên tại một trường đại học ở khu vực Đồng bằng sông Cửu Long. Kết quả cho thấy giảng viên đã triển khai nhiều chiến lược khác nhau trong quá trình lựa chọn hoạt động, bao gồm: phân hóa nhiệm vụ, hỗ trợ học tập có điều chỉnh, điều chỉnh ngữ liệu đầu vào, và áp dụng các chiến lược tương tác nhằm đáp ứng sự đa dạng của người học. Tuy nhiên, họ vẫn gặp phải nhiều thách thức đáng kể liên quan đến điều kiện bối cảnh, năng lực chuyên môn của giảng viên, cũng như yếu tố người học. Nghiên cứu cho thấy tính phức tạp trong việc lựa chọn hoạt động giảng dạy trong các lớp học không đồng trình độ, đồng thời nhấn mạnh sự cần thiết của việc tăng cường hỗ trợ thể chế và bồi dưỡng chuyên môn cho giảng viên nhằm nâng cao hiệu quả thực hành sư phạm trong bối cảnh giáo dục đại học.

**Từ khóa:** chiến lược, lớp học tiếng Anh đa trình độ, lựa chọn hoạt động, thách thức

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## **Ghi chú**

Các tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

# EFFECTIVENESS OF FLASHCARDS IN ENHANCING VOCABULARY LEARNING AMONG 4<sup>TH</sup> GRADERS AT HUNG LONG 1 PRIMARY SCHOOL

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**Abstract:** *This study aimed to investigate the effectiveness of flashcards in vocabulary learning of fourth graders at Hung Long 1 Primary School. The study used a mixed methods approach with pre-and post-test vocabulary measures using multiple-choice questions, as well as questionnaires and classroom observations of 100 fourth graders to measure student perceptions and interviews with two experienced teachers of English. Flashcards were typically used in one to two teaching periods per week (students had four lessons and used English in one week) and were associated with the introduction of new words to students to support vocabulary learning through imagery and memory, resulting in the increased number of words learned. Students reported that they were more engaged and remembered more information, while teachers also indicated improved teaching outcomes. The purpose of this study was to investigate how effective flashcards are in developing vocabulary in young learners and to provide some implications for integrating flashcards into primary education.*

**Keywords:** *electronic flashcards, flashcards, mixed methods, primary education, teaching tool, vocabulary learning*

## 1. INTRODUCTION

Teaching English vocabulary to primary school students presents difficulties, as traditional learning methods often involve forced memorization, causing a lack of interest and low retention rates. To address these issues, educators and researchers have introduced innovative teaching methods, such as using traditional and electronic flashcards with integrated images, sounds, and example sentences. According to Nuryani & Odo Fadloeli (2021), flashcards help teachers deliver lessons more effectively while increasing student engagement and enthusiasm for learning English. Similarly, Aba (2019) highlights that flashcards can be used for vocabulary introduction, classification, and memory games, stimulating cognitive processes.

Furthermore, flashcards enable teachers and students to enhance the learning experience by reinforcing vocabulary through interactive activities. Teachers can

integrate flashcards into classroom games, such as having students match cards to lesson content or use them in review exercises. These methods help improve vocabulary retention, foster active participation, and create a more engaging learning environment for primary school students.

Vocabulary development is essential for acquiring the four language skills: listening, speaking, reading, and writing. However, traditional teaching methods do not effectively support rapid and lasting vocabulary retention. At Hung Long 1 Primary School, as well as other educational institutions, there is a need to address these challenges and implement optimal teaching strategies.

Grade 4 students were selected for research due to the observed difficulties they faced in learning vocabulary through conventional methods, such as rote memorization and note-taking, which lack creativity and are limited in effectiveness.

One major reason for continued reliance on traditional methods is that some teachers do not update their teaching strategies, leading to student disengagement. This can result in negative attitudes toward learning new words, difficulty in understanding vocabulary meaning, and a lack of enthusiasm for English learning.

Moreover, students struggle to apply learned vocabulary in practice, which affects their confidence, particularly during tests. A limited vocabulary also hinders communication skills, reducing their willingness to engage in English conversations. As a result, frequent mistakes in vocabulary-related assessments discourage students, diminishing their motivation and interest in learning English.

1. How effective are electronic flashcards in improving vocabulary acquisition, as measured by test scores and retention rates, among 4<sup>th</sup>-grade students at Hung Long 1 Primary School?

2. How do students and teachers perceive the effectiveness and engagement level of flashcards compared to standard vocabulary teaching methods at Hung Long 1 Primary School?

## **2. LITERATURE REVIEW AND RESEARCH METHODS**

### **2.1. Literature Review**

#### **2.1.1 Definition of Electronic Flashcards**

Electronic flashcards enhance vocabulary acquisition through multimedia elements, adaptive feedback, and spaced repetition algorithms (Nation, 2013; Karpicke & Roediger, 2008). They reinforce word associations using visual and auditory stimuli and support retrieval-based learning. Digital flashcards are categorized as static, resembling traditional ones, or interactive, incorporating quizzes and speech recognition for engagement. Their spaced repetition systems optimize review

intervals to improve retention (Kornell & Bjork, 2009). While effective, electronic flashcards should be integrated with communicative and contextual learning for a more comprehensive vocabulary acquisition strategy (Schmitt & Schmitt, 2020).

#### **2.1.2. Features of Effective Electronic Flashcards**

Electronic flashcards are an effective tool for fourth graders to learn vocabulary due to their interactive features, which include self-testing, feedback, and pronunciation practice. They incorporate games like matching words, puzzles, and rapid word recall, enhancing engagement and memory retention (Baddeley, 2019). Unlike traditional flashcards, electronic versions use multisensory elements such as images, sounds, and animations, aligning with dual coding theory to improve recall (Paivio, 2014). Spaced repetition further supports long-term retention by scheduling reviews based on learning levels (Cepeda et al., 2008). Game-like features, including points, leaderboards, and progress tracking, increase motivation (Deterding et al., 2011). Additionally, teachers can customize flashcards to suit students' skill levels, optimizing vocabulary instruction in elementary education (Ellis, 2015).

#### **2.1.3. Benefits of Electronic Flashcards in Vocabulary Learning**

Electronic flashcards enhance vocabulary acquisition in fourth graders by enabling quick reflex practice, memorization, and efficient learning. Their use of spaced repetition optimizes long-term retention by reviewing words at ideal intervals (Cepeda et al., 2006). A multisensory approach, integrating text, images, audio, and animation, supports deeper processing and comprehension (Paivio, 2014). Gamification elements, such as rewards, points, and progress tracking, increase engagement and

intrinsic motivation (Deterding et al., 2011). These flashcards also provide flexibility for self-paced learning (Ellis, 2015) and offer immediate feedback, reinforcing learning through real-time error correction (Baddeley, 2019). Additionally, teachers can customize them to match students' proficiency levels, making vocabulary instruction more effective (Nation, 2001).

#### ***2.1.4. Challenges in Implementing Electronic Flashcards in Classrooms***

Despite the advantages of electronic flashcards in vocabulary learning, their implementation in primary classrooms faces several challenges. Limited technology and accessibility, particularly in under-resourced schools, hinder their widespread use (Selwyn, 2021). Technical issues such as unreliable internet and software glitches further disrupt learning. Teacher training and pedagogical integration are also significant barriers, as educators need adequate technological knowledge and support to use electronic flashcards effectively (Hennessy et al., 2015). Resistance to technology and concerns over screen time can further limit adoption (Tondeur et al., 2017). Additionally, excessive reliance on digital tools may lead to distraction and cognitive overload, reducing deep learning (Sweller, 1988). Content quality is another concern, as pre-made flashcards may lack contextual richness, requiring teachers to invest time in customization (Nation, 2001).

#### ***2.1.5. Comparison between Electronic Flashcards with Integrated Artificial Intelligence (AI) and Traditional Flashcards***

Traditional flashcards are simple paper-based tools often used in repetitive activities, which can lead to passive learning and reduced student engagement. Electronic flashcards, like those on Anki or Quizlet, offer greater accessibility and use spaced repetition to enhance memory but lack

interactive features and progress tracking. In contrast, AI-integrated flashcards personalize learning by analyzing student data, creating customized content, adjusting difficulty levels, and including features such as native pronunciation, voice recognition, and educational games. These tools also save teachers preparation time. However, their adoption remains limited due to technical challenges, lack of awareness, copyright restrictions, and inadequate infrastructure in rural schools, making traditional flashcards still more commonly used in many settings.

## **2.2 Research Methods**

### ***2.2.1. Research Design***

In the study, the researcher used an exploratory design to examine the competing effects of flashcards in teaching fourth-grade vocabulary at Hung Long Primary School, which used a mixed methods approach. This system included both quantitative and qualitative exploration strategies that were not included in other methodological options related to measuring the use of flashcards in vocabulary acquisition. The mixed systems study combines the strengths of qualitative and quantitative data to more fully answer the proposed question. The quantitative system will include both pre-and post-tests to measure the effects of flashcards on vocabulary comprehension. This perspective is consistent with Nation's (2001) distinction that, of course, only statistical evidence is important in evaluating educational interventions. Statistical analyses will explore differences in vocabulary acquisition and retention when flashcards are used compared to traditional vocabulary instruction in the study.

### ***2.2.2. Participants***

In the study, the sample will include 100 the fourth graders, in which 45 boy – pupils and 55 girl – pupils, and two experienced teachers of English, along with two experienced teachers from Hung

Long 1 Primary School. All participants are volunteers in the study. The target population includes the fourth graders with different vocabulary and word memory abilities.

**2.2.3. Instruments**

The study employs a mixed-methods approach to investigate the impact of flashcards on fourth-grade vocabulary learning at Hung Long 1 Primary School. Data collection includes standardized vocabulary tests, questionnaires, and classroom observations. Pre- and post-tests assess vocabulary acquisition through receptive and written tasks (Nation, 2001). Questionnaires capture students’ perceptions and teachers’ evaluations of flashcard use (Creswell, 2017). Classroom observations, guided by a structured checklist, document real-time interactions (Tashakkori & Teddlie, 2010). By integrating quantitative and qualitative data, the study aims to provide a comprehensive analysis of flashcards’ effectiveness in vocabulary instruction.

**2.2.4. Data Analysis**

The data analysis in this study employed a mixed-methods approach, combining quantitative and qualitative techniques to evaluate the effectiveness of flashcards in vocabulary learning among fourth-grade pupils. Quantitative analysis involved

descriptive statistics, paired-sample t-tests, and effect size calculations (Cohen’s d) to measure differences in vocabulary acquisition before and after the intervention, along with reliability tests such as Cronbach’s alpha for internal consistency. Additionally, differential item analysis and regression analysis explored factors influencing vocabulary gains. Qualitative analysis was conducted through thematic coding of open-ended questionnaires and interviews with pupils and teachers, identifying recurring patterns related to engagement, perceived effectiveness, and challenges. Test scores, questionnaire data, and interviews ensured a comprehensive interpretation, offering both statistical evidence and contextual understanding of flashcard use in primary education.

**3. RESULTS AND DISCUSSIONS**

**3.1. Results**

**3.1.1. Pre-test**

The pre-test scores in EG and CG are given in Table 1. The control group, consisting of 50 participants, exhibited a mean pre- test score of 8.0800 (SD= 1.53649, SEM= 0.21729). In contrast, the experimental group also 50 participants, displayed a mean pre-tets score of 8.6600 (SD=1.39401, SEM=0.19714).

**Table 1. Pre-test scores of EG and CG**

	CLASS	N	Mean	Std. Deviation	Std. Error Mean
Pre-test results	Control class	50	8.0800	1.53649	.21729
	Experimental class	50	8.6600	1.39401	.19714

Comparing the mean pre-test scores between the two groups, it is clear that the experimental group started with a higher mean score of 8.6600, while the control group had a slightly lower mean pre-test score of 8.0800. This suggests that, on

average, participants in the control group started the study with higher performance levels than those in the experimental group.

The standard deviations of both groups were relatively close, with the Experimental group showing a value of 1.39401 and the

control group showing a slightly higher standard deviation of 1.53649. This suggests a similar amount of variation or dispersion of scores around the mean within each group.

When looking at the standard error of the mean, we see relatively low values for both groups: 0.19714 for the experimental group and 0.21729 for the control group. A low standard error indicates a precise estimate of the sample mean, suggesting that these

means are likely to be close to the true population mean.

Therefore, the experimental group started with a higher average pretest score than the control group. The standard deviation and standard error indicate a reasonable degree of variability and precision in estimating the population mean for both groups. Independent samples t-tests were conducted to compare the pretest scores between the control and experimental groups in Table 2.

**Table 2. Pre-test results of Independent Sample T-Test**

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pre_test_results	Equal variances assumed	.422	.517	-1.977	98	.051	-.58000	.29340	-1.16224	.00224
	Equal variances not assumed			-1.977	97.086	.051	-.58000	.29340	-1.16230	.00230

Examining the independent samples test results, Levene's Test for Equality of Variances shows an F-value of 0.422 with a significance value of 0.517. Since the significance value is greater than 0.05, the assumption of equal variances is met. Consequently, the analysis proceeds with the row for "Equal variances assumed."

The t-test reveals a t-value of -1.977 with 98 degrees of freedom (df) and a significance value of 0.051. While this p-value is slightly above the conventional threshold of 0.05, it suggests a marginal difference in the pre-test scores between the two groups. The mean difference is -0.5800, indicating that the experimental group had a lower average score compared to the control group. The 95% confidence interval for the mean difference ranges from - 1.16224 to 0.00224, which includes zero, further supporting the lack of a statistically

significant difference between the groups.

The standard error of the mean difference is 0.29340, indicating a moderate level of precision in estimating the difference between group means. Overall, while the control group demonstrated a slightly higher mean pre-test score than the experimental group, this difference is not statistically significant at the 0.05 level, suggesting comparable baseline performance levels between the two groups.

**3.1.2. Post-test**

The mean score indicates the central tendency of the data. In the post-test, Table 3 showed that the "Experimental" group had a higher mean post-test score (9.1200) compared to the "Control" group (8.8200). This suggests that, on average, participants in the Control group performed better in the pre-test.

**Table 3. Post-test scores of EG and CG**

Group Statistics					
	CLASS	N	Mean	Std. Deviation	Std. Error Mean
Pre-test results	Control class	50	8.8200	1.70533	.24117
	Experimental class	50	9.1200	1.32002	.18668

The table illustrates the descriptive statistics for the posttest results in the experimental and control groups. The average score for the Control group was 8.8200, while the experimental group had a slightly higher average score of 9.1200, suggesting that participants in the control group outperformed those in the experimental group on average.

The standard deviation reflects the variation in scores within each group. The control group had a higher standard deviation of 1.70533 compared to 1.32002

in the experimental group, indicating greater variation in performance in the experimental group. This indicates a wider distribution of posttest scores in the experimental group.

The standard error of the mean, which estimates how much the sample mean is expected to deviate from the true population mean, was smaller in the experimental group (0.18668) than in the control group (0.24117). This difference shows slightly higher accuracy in estimating the mean value of the control group compared to the experimental group.

**Table 4. Post-test results of Independent Sample T-Test**

Independent Samples Test										
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post_test_results	Equal variances assumed	4.565	.035	-2.361	98	.020	-.72000	.30498	-1.32522	-.11478
	Equal variances not assumed			-2.361	92.207	.020	-.72000	.30498	-1.32570	-.11430

The t-statistic is -2.361 with 98 degrees of freedom under the assumption of equal variances. Additionally, when equal variances are not assumed, the t-statistic remains the same (-2.361), but the degrees of freedom are adjusted to 92.207. The associated two-tailed p-value is 0.020, which is below the 0.05 threshold for statistical significance.

Levene's Test for Equality of Variances has an F-statistic of 4.565 with a significance value (Sig.) of 0.035, indicating that the assumption of equal variances is violated as the p-value is below 0.05. Therefore, the results for the row "Equal variances not

assumed" should be interpreted.

The mean difference between the groups is -0.72000, with a standard error of 0.30498. The 95% confidence interval for the mean difference ranges from -1.32570 to -0.11430. Since this confidence interval does not include zero, it suggests that there is a statistically significant difference in post-test scores between the two groups.

**3.1.3. Questionnaire**

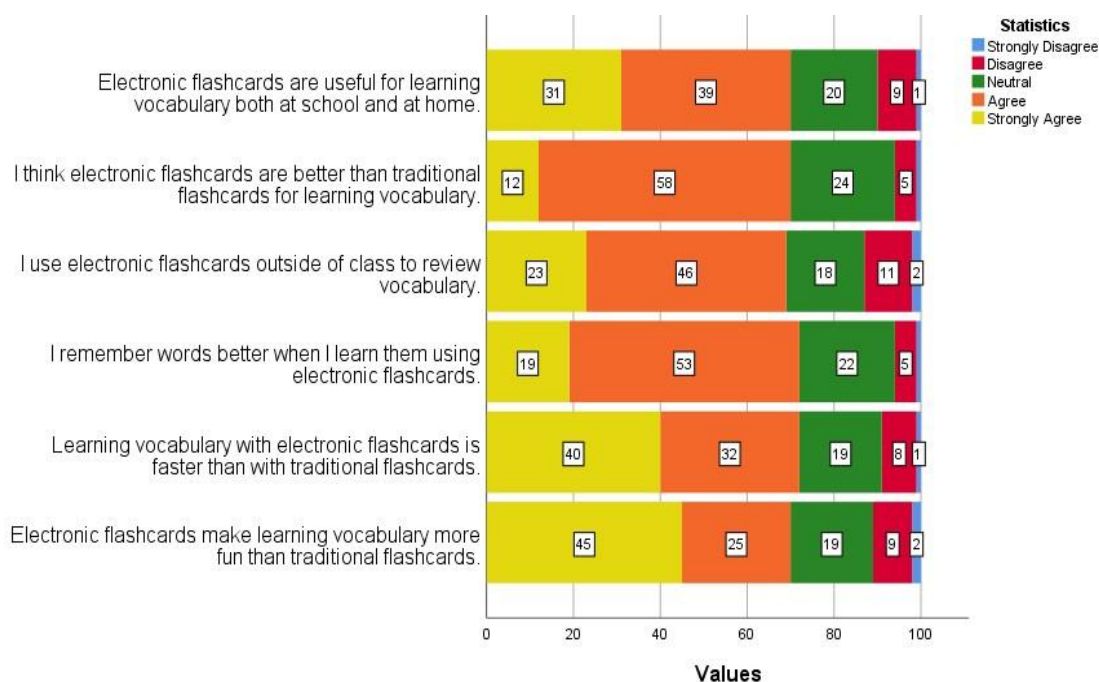
The reliability of the questionnaire and constructs related to the effectiveness of electronic flashcards in improving English vocabulary learning are shown in Table 5.

**Table 5. Reliability of the questionnaire and construct**

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.855	.853	6

The Cronbach's alpha value of 0.855 indicates a high level of internal consistency between the items, indicating that the questionnaire is reliable in assessing the proposed solutions. This suggests that the items measure the same underlying concepts related to the effectiveness and engagement of flashcards for fourth graders.

Furthermore, this reliability supports the validity of the questionnaire in capturing students' views on the proposed engagement levels. It ensures that the findings can provide meaningful insights into strategies to enhance vocabulary memorization for primary school students.



**Figure 1. The effectiveness of e-flashcards compared to traditional flash cards**

The majority of respondents, with 39% agreeing and 20% strongly agreeing, said that e-flashcards are useful for learning vocabulary both at school and at home. This suggests that digital tools play a supportive role in vocabulary acquisition both inside and outside the classroom.

A significant proportion of respondents,

with 58% agreeing and 24% strongly agreeing, believe that e-flashcards are better than traditional flashcards for learning vocabulary. This suggests that many students prefer digital methods over traditional methods for learning vocabulary.

A significant proportion of respondents, with 46% agreeing and 18% strongly

agreeing, use electronic flashcards outside the classroom to review vocabulary. However, 23% disagreed, stating that while many students find digital flashcards useful, others may not engage with them outside of school.

In terms of vocabulary retention, 53% agreed and 22% strongly agreed that they remembered words better when using electronic flashcards. This highlights the effectiveness of digital flashcards in supporting long-term vocabulary retention.

When it comes to learning speed, 40% agreed and 32% were neutral that learning vocabulary using electronic flashcards was faster than traditional flashcards. This shows that while a large number of students consider digital flashcards to be a more effective tool, some are still uncertain about their advantages over traditional methods.

Finally, 45% of respondents agreed and 25% were neutral, while 19% strongly agreed that electronic flashcards make learning vocabulary more fun than traditional flashcards. This indicates that digital tools contribute positively to students' engagement and interest in vocabulary learning.

### 3.2. Discussions

This study confirms the effectiveness of electronic flashcards in improving vocabulary acquisition among primary school students. Pre- and post-test comparisons indicate significant vocabulary recall improvement among students using electronic flashcards, aligning with previous research on their benefits of flashcards for young learners.

Student responses from the questionnaires showed a generally more positive attitude towards e-flashcards than traditional flashcards. At the same time, it highlighted the role of electronic flashcards in making learning more engaging and supporting rapid

vocabulary memorization through visual and interactive methods that traditional flashcards could not provide. E-flashcards not only aid vocabulary learning but also enhance motivation by providing a concrete approach to abstract linguistic concepts.

Beyond vocabulary acquisition, the study suggests that electronic flashcards can promote student-centered learning by replacing passive memorization with interactive engagement. This is particularly important at Hung Long 1 Primary School, where students have limited exposure to English outside the classroom due to economic constraints. Electronic Flashcards offer an adaptable and structured approach to support learning in such contexts.

However, the study has limitations. It focuses only on vocabulary acquisition, without assessing grammar, pronunciation, or long-term retention. Additionally, the research was limited to fourth-grade students and did not explore its applicability to other grade levels. Future studies should examine the broader impact of flashcards on language learning and their long-term effectiveness.

## 4. CONCLUSION AND SUGGESTION

### 4.1. Conclusion

The study confirmed that electronic flashcards significantly improved vocabulary acquisition compared to traditional flashcards in 4th graders at Hung Long 1 Primary School. The results of the pre- and post-tests showed improved vocabulary retention, as flashcards supported memorization through repeated exposure, increased interactivity, and significantly supported memory, cognitive processing, and vocabulary consolidation.

Student responses to exposure to electronic flashcards highlighted their effectiveness in making learning engaging and motivating students during vocabulary

acquisition. Their structured and repetitive nature allowed for dynamic, self-directed vocabulary review, making them more effective than rote memorization.

However, challenges remained, as some students benefited more from electronic flashcards with images and audio. Individual differences in learning suggest that combining electronic flashcards with other methods may optimize their impact.

#### 4.2. Suggestion

Research confirms the effectiveness of flashcards, especially electronic flashcards, in improving vocabulary acquisition in primary school students and provides some recommendations for optimizing the use of electronic flashcards.

Teachers should incorporate electronic flashcards into daily vocabulary lessons and integrate them with interactive activities such as jigsaw puzzles and storytelling to enhance engagement and retention. Structured lesson plans can ensure consistent practice and prevent passive learning.

Electronic flashcards should complement or replace traditional methods of using

flashcards, as interactive features such as audio and animation can support vocabulary acquisition. Access to mobile or online applications can promote self-regulated learning outside the classroom.

Teacher training programs should provide strategies for effective use of flashcards or workshops that can help educators adapt flashcard activities including electronic flashcards to different learning styles, ensuring inclusivity.

Future research should examine the long-term effects of flashcards on vocabulary retention, as well as their effects on other language skills and the differences in retention performance between traditional and electronic flashcards.

Encouraging parent involvement by promoting electronic flashcard-based activities at home through exposure to platforms such as Quizlet, Baamboozle, and Wordwall. Schools in conjunction with English language teachers can support parents through workshops and guidance on effective vocabulary practice.

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# HIỆU QUẢ CỦA FLASHCARD TRONG VIỆC NÂNG CAO VIỆC HỌC TỪ VỰNG CHO HỌC SINH LỚP 4 TRƯỜNG TIỂU HỌC HƯNG LONG 1

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**Tóm tắt:** Nghiên cứu này nhằm khảo sát hiệu quả của việc sử dụng flashcards trong việc học từ vựng của học sinh lớp 4 tại Trường Tiểu học Hưng Long 1. Nghiên cứu áp dụng phương pháp hỗn hợp, bao gồm bài kiểm tra từ vựng trước và sau can thiệp, bảng khảo sát và quan sát lớp học đối với 100 học sinh lớp 4 để đo lường nhận thức của học sinh, đồng thời phỏng vấn hai giáo viên tiếng Anh có kinh nghiệm. Flashcards thường được sử dụng trong một đến hai tiết học mỗi tuần (học sinh có bốn tiết tiếng Anh mỗi tuần) và được áp dụng khi giới thiệu từ mới nhằm hỗ trợ việc học từ vựng thông qua hình ảnh và ghi nhớ, giúp tăng số lượng từ vựng mà học sinh học được. Học sinh cho biết các em hứng thú hơn và ghi nhớ thông tin tốt hơn, trong khi giáo viên cũng ghi nhận hiệu quả giảng dạy được cải thiện. Mục tiêu của nghiên cứu là tìm hiểu mức độ hiệu quả của flashcards trong việc phát triển vốn từ vựng cho học sinh tiểu học, đồng thời đưa ra một số hàm ý cho việc tích hợp flashcards vào chương trình giáo dục tiểu học.

**Từ khóa:** công cụ giảng dạy, flashcards, flashcards điện tử, giáo dục tiểu học, học từ vựng, phương pháp hỗn hợp

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## Ghi chú

Các tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

# CÁC YẾU TỐ ẢNH HƯỞNG ĐẾN Ý ĐỊNH NGHIÊN CỨU KHOA HỌC CỦA SINH VIÊN TRƯỜNG CAO ĐẲNG ĐÀ LẠT

Nguyễn Thị Thuý

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**Tóm tắt:** Tác giả áp dụng nghiên cứu định tính để xây dựng thang đo và định lượng để kiểm định mô hình nghiên cứu. Thông qua khảo sát người học tại Trường Cao đẳng Đà Lạt và được phân tích trên phân tích thống kê SPSS phiên bản 20. Phân tích hồi quy chỉ ra bốn yếu tố ảnh hưởng đến ý định tham gia hoạt động nghiên cứu khoa học (NCKH) của người học là sinh viên tại Trường Cao đẳng Đà Lạt, các yếu tố được sắp xếp theo mức độ tác động tăng dần như sau: Nhận thức về lợi ích của NCKH ( $\beta = 0,094$ ), Điều kiện thực hiện NCKH tại trường ( $\beta = 0,128$ ), Năng lực của sinh viên ( $\beta = 0,186$ ), và Chính sách Nhà trường ( $\beta = 0,574$ ). Ngoài việc kiểm nghiệm tính thực tế của các mô hình lý thuyết, nghiên cứu còn cung cấp cơ sở thực tiễn cho Trường Cao đẳng Đà Lạt trong việc hoạch định các chính sách quản lý phù hợp để thu hút sinh viên tham gia NCKH.

**Từ khóa:** Cao đẳng Đà Lạt, nghiên cứu, sinh viên, ý định NCKH, yếu tố ảnh hưởng

## 1. GIỚI THIỆU

Hoạt động nghiên cứu khoa học (NCKH) giữ vai trò quan trọng trong việc hình thành và phát triển tư duy sáng tạo, năng lực nghiên cứu cũng như tác phong làm việc khoa học cho sinh viên. Thông qua quá trình tham gia NCKH, người học không chỉ được tiếp cận với phương pháp luận khoa học hiện đại mà còn được rèn luyện kỹ năng tư duy phân tích, tổng hợp thông tin, lập luận logic và làm việc nhóm hiệu quả. Đây là môi trường lý tưởng để sinh viên vận dụng kiến thức lý thuyết vào thực tiễn, từ đó giải quyết những vấn đề đặt ra trong khoa học và đời sống (Zikmund, 2000). Hoạt động này đóng vai trò bổ trợ thiết yếu cho quá trình học tập chính khóa, góp phần nâng cao chất lượng đào tạo. Tuy nhiên, để duy trì và thúc đẩy sự tham gia tích cực của sinh viên trong NCKH, cần có cơ chế hỗ trợ đồng bộ từ đội ngũ giảng viên, nhà trường và các tổ chức liên quan.

Trường Cao đẳng Đà Lạt được thành lập theo Quyết định số 753/QĐ-BLĐTĐ ngày 18/8/2022 của Bộ trưởng Bộ Lao

động - Thương binh và Xã hội về việc sáp nhập Trường Cao đẳng Sư phạm Đà Lạt, Trường Cao đẳng Kinh tế - Kỹ thuật Lâm Đồng vào Trường Cao đẳng Nghề Đà Lạt và đổi tên thành Trường Cao đẳng Đà Lạt. Trường đào tạo các nghề đảm bảo người lao động có kiến thức, kỹ năng sư phạm và nghề nghiệp theo 3 cấp trình độ: Cao đẳng; Trung cấp và Sơ cấp thuộc các khoa Kinh tế, Công nghệ Thông tin, Điện – Điện tử, Cơ khí Động lực, Công nghệ Sinh học, Khoa học Cơ bản, Sư phạm, Ngoại ngữ và Du lịch. Tuy nhiên số lượng đề tài nghiên cứu khoa học của học sinh sinh viên còn ít, năm học 2024-2025 có 2 đề tài nghiên cứu của học sinh sinh viên được nghiệm thu. Hiện nay, chưa có công trình nào nghiên cứu cụ thể về các yếu tố ảnh hưởng đến ý định tham gia NCKH của sinh viên. Chính vì vậy, nghiên cứu này được thực hiện nhằm xác định mức độ ảnh hưởng của từng yếu tố liên quan, từ đó cung cấp cơ sở thực tiễn cho Trường Cao đẳng Đà Lạt trong việc hoạch định các chính sách quản lý phù hợp để thu hút sinh viên tham gia NCKH.

## 2. TỔNG QUAN CƠ SỞ LÝ THUYẾT VÀ PHƯƠNG PHÁP NGHIÊN CỨU

### 2.1. Cơ sở lý thuyết

#### 2.1.1. Khái niệm về Nghiên cứu Khoa học

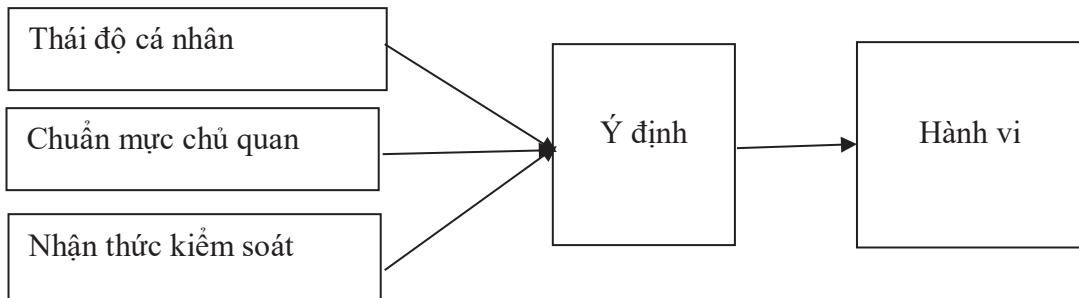
NCKH được định nghĩa như là một chuỗi các bước có tính hệ thống nhằm khám phá và giải thích dựa trên các nguyên tắc phương pháp luận khoa học (Babbie, 1989). Trong lĩnh vực kinh doanh, hoạt động này cung cấp những dữ liệu khách quan và tin cậy để làm cơ sở cho các quyết định quản lý (Zikmund, 2000).

#### 2.1.2. Các lý thuyết nền tảng

Khung lý thuyết: Lý thuyết hành vi dự định (Theory of Planned Behavior – TPB) do Ajzen đề xuất năm 1985 và Thuyết Tự

quyết (Self-Determination Theory – SDT) được phát triển bởi Ryan và Deci vào năm 2017.

TPB được Ajzen (1985) mở rộng Lý thuyết Hành động Hợp lý (TRA) bằng cách đưa thêm khái niệm Nhận thức Kiểm soát Hành vi (Perceived Behavioral Control). Trong mô hình nghiên cứu hiện tại, TPB đóng vai trò khung lý thuyết tổng thể: thái độ cá nhân và chuẩn mực chủ quan thúc đẩy ý định, còn niềm tin vào học thuật và tài nguyên học thuật là các thành phần của nhận thức kiểm soát, qua đó ảnh hưởng đến khả năng tham gia NCKH. Đồng thời, các chính sách khuyến khích của nhà trường được xem như tác nhân bên ngoài, ảnh hưởng đến cả ba thành tố chính của TPB.



**Hình 1. Mô hình TPB**

(Nguồn: Ajzen, 1985)

Thuyết Tự quyết (SDT) được tổng hợp và phát triển bởi Ryan và Deci (2017), là một lý thuyết toàn diện về động lực, sự phát triển và hạnh phúc của con người. SDT khẳng định rằng con người có ba nhu cầu tâm lý cơ bản:

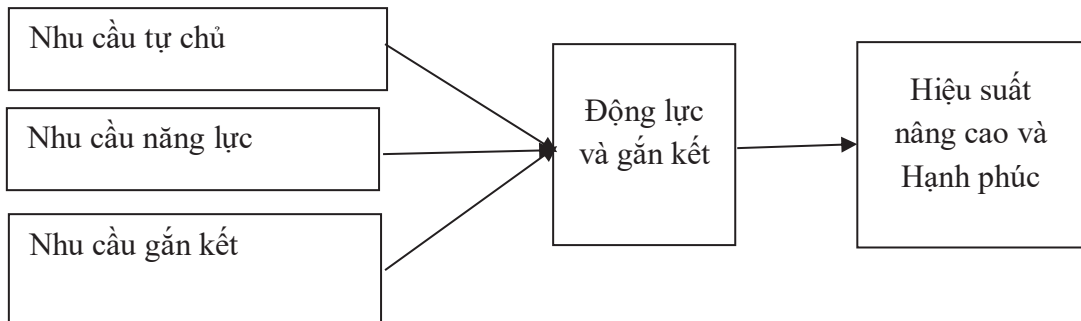
(1) Nhu cầu Tự chủ (Autonomy): Cảm giác rằng mọi hành vi hành động của cá nhân tự quyết định và kiểm soát nội tại, không bị chi phối bởi yếu tố bên ngoài, đồng thời phù hợp với nguyện vọng riêng.

(2) Nhu cầu Năng lực (Competence): Niềm tin vào năng lực cá nhân trong việc thực thi công việc, đạt được mục tiêu và làm chủ môi trường.

(3) Nhu cầu Gắn kết (Relatedness): Cảm

nhận sự gắn bó với những cá nhân xung quanh, quan tâm và thuộc về những người khác, được yêu thương và tôn trọng.

Theo Ryan và Deci (2017) việc thỏa mãn các nhu cầu này thúc đẩy động lực nội tại, phát triển tâm lý lành mạnh và hạnh phúc. Đặc biệt, SDT lý giải vai trò của động lực bên trong mỗi cá nhân: khi sinh viên nhận thấy NCKH thú vị thì động lực tham gia của họ tăng mạnh. SDT cũng nhấn mạnh ảnh hưởng của nhu cầu năng lực: sinh viên cảm nhận năng lực cao trong nghiên cứu sẽ có động cơ mạnh hơn. Điều này hoàn toàn tương thích với khái niệm tự tin học thuật (academic self-efficacy), theo đó sự tự tin càng cao thì ý định tham gia NCKH càng mạnh.



**Hình 2. Mô hình SDT**

(Nguồn: Ryan và Deci (2017))

### 2.1.3. Nghiên cứu liên quan

Maddens và cộng sự (2023) đã khảo sát ảnh hưởng của ba nhu cầu tâm lý cơ bản theo SDT (tự chủ, năng lực, gắn kết) đối với động lực học tập và kết quả học kỹ năng nghiên cứu của người học. Các nhà nghiên cứu so sánh học trực tuyến tiêu chuẩn với việc học có thêm yếu tố hỗ trợ nhu cầu tâm lý. Kết quả chỉ ra sự tiến bộ kỹ năng nghiên cứu, nhưng nhóm được hỗ trợ nhu cầu tâm lý thể hiện tốt hơn trong nhiệm vụ viết đề cương, phản ánh khả năng tích hợp kỹ năng cao hơn và động lực tự chủ hay bị kiểm soát, mức độ thiếu động lực (amotivation) có xu hướng thấp hơn ở nhóm được hỗ trợ nhu cầu tâm lý.

Nguyễn Thị Khánh Phương và cộng sự (2024) xác định ý định thực hiện NCKH của sinh viên chịu tác động bởi nhận thức về lợi ích của NCKH, sự hướng dẫn và khuyến khích từ nhà trường, sự ủng hộ từ gia đình, cùng với giới hạn về năng lực cá nhân.

Bùi Thị Lâm và Trần Mai Loan (2022) xác định các nhân tố ảnh hưởng đến ý định tham gia NCKH của sinh viên: thái độ của sinh viên đối với NCKH, năng lực nghiên cứu của sinh viên, mức độ khuyến khích từ nhà trường và điều kiện thực tiễn triển khai.

### 2.1.4. Mô hình nghiên cứu đề xuất

Từ các lý thuyết và thực tế tại trường Cao đẳng Đà Lạt, tác giả đưa ra 5 yếu tố ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt: Thái độ NCKH, Điều kiện thực hiện NCKH tại trường, Chính sách NCKH của Nhà trường, Nhận thức về lợi ích của NCKH và Năng lực NCKH.

#### Tác giả đưa ra các giả thiết sau:

H1: Thái độ NCKH có ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

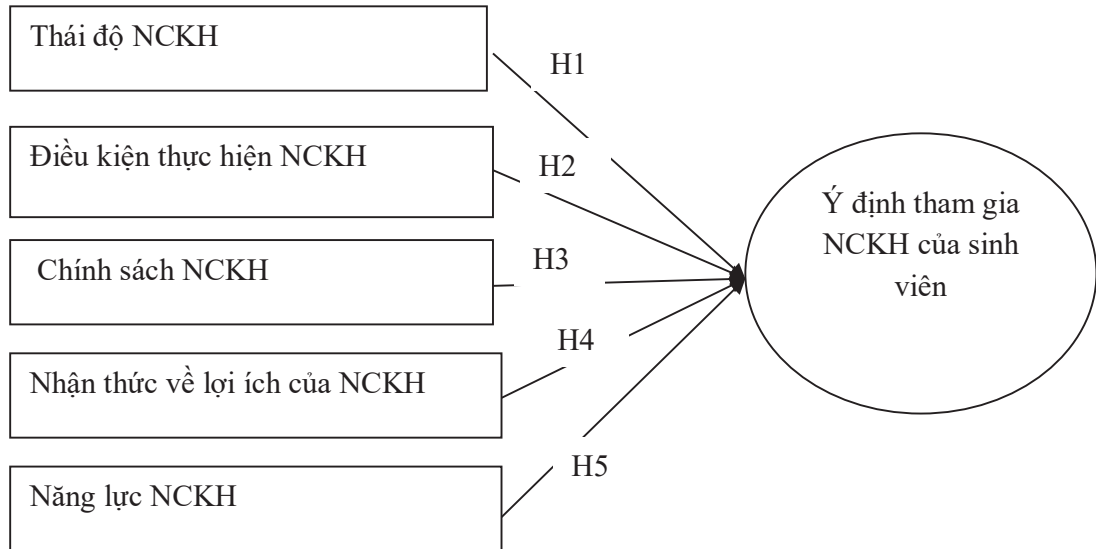
H2: Điều kiện thực hiện NCKH tại trường có ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

H3: Chính sách NCKH của Nhà trường có ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

H4: Nhận thức về lợi ích của NCKH có ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

H5: Năng lực NCKH có ảnh hưởng đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

**Mô hình nghiên cứu như sau:**



**Thang đo nghiên cứu được tổng hợp qua bảng sau:**

**Bảng 1. Thang đo nghiên cứu**

BIẾN QUAN SÁT	NGUỒN
<b>1. Nhận thức về lợi ích của NCKH (5 biến quan sát)</b>	
Tham gia nghiên cứu khoa học giúp phát triển tư duy logic và khả năng giải quyết vấn đề của tôi.	Nguyễn Thị Khánh Phương và cộng sự (2024) có hiệu chỉnh theo nghiên cứu định tính
Nghiên cứu khoa học cung cấp cho tôi kinh nghiệm quý báu trong việc viết báo cáo khoa học, chuyên đề và khóa luận tốt nghiệp	
NCKH mang lại cơ hội giành các giải thưởng danh giá và công bố công trình nghiên cứu trên các tạp chí uy tín.	
Tham gia NCKH tạo cơ hội cải thiện thành tích học tập, bao gồm khả năng nhận được điểm thưởng từ khoa và nhà trường.	
NCKH gia tăng sự hiểu biết sâu sắc và thực tiễn của tôi về chuyên ngành đang học	
<b>2. Thái độ NCKH của sinh viên (4 biến quan sát)</b>	
Tôi cảm thấy rất hứng thú và yêu thích việc tham gia vào các hoạt động nghiên cứu khoa học.	Bùi Thị Lâm và Trần Mai Loan (2022) có hiệu chỉnh theo nghiên cứu định tính
Đối với tôi, nghiên cứu khoa học là một hoạt động hấp dẫn và đáng để đầu tư thời gian, công sức.	
Tôi luôn sẵn lòng tham gia nếu có cơ hội thực hiện một dự án nghiên cứu khoa học	

<p>Tôi tin rằng việc tham gia nghiên cứu khoa học là một phần quan trọng và cần thiết trong quá trình học tập đại học của mình.</p>	
<p><b>3. Năng lực NCKH của sinh viên (4 biến quan sát)</b></p>	
<p>Tôi tự tin vào khả năng của mình trong việc tiếp thu kiến thức và kỹ năng cần thiết để thực hiện nghiên cứu khoa học.</p>	<p>Bùi Thị Lâm và Trần Mai Loan (2022); Nguyễn Thị Khánh Phương và cộng sự (2024) có hiệu chỉnh theo nghiên cứu định tính</p>
<p>Tôi tin tưởng vào khả năng hoàn thành thành công một dự án nghiên cứu khoa học.</p>	
<p>Tôi cảm thấy mình có đủ năng lực để giải quyết các vấn đề phức tạp phát sinh trong quá trình nghiên cứu khoa học.</p>	
<p>Tôi có khả năng phát triển các ý tưởng nghiên cứu chuyên sâu và độc đáo</p>	
<p><b>4. Chính sách NCKH của Nhà trường (5 biến quan sát)</b></p>	
<p>Nhà trường và Khoa có các chính sách khen thưởng rõ ràng và hấp dẫn dành cho sinh viên tham gia nghiên cứu khoa học.</p>	<p>Bùi Thị Lâm và Trần Mai Loan (2022) có hiệu chỉnh theo nghiên cứu định tính</p>
<p>Nhà trường cung cấp các chương trình hỗ trợ tài chính hoặc nguồn lực cần thiết (ví dụ: kinh phí, vật tư) cho các dự án nghiên cứu khoa học của sinh viên.</p>	
<p>Nhà trường có các quy định và cơ chế khuyến khích giảng viên tích cực hướng dẫn và hỗ trợ sinh viên trong hoạt động nghiên cứu khoa học.</p>	
<p>Nhà trường tạo điều kiện thuận lợi cho sinh viên tiếp cận các nguồn thông tin, tài liệu và cơ sở dữ liệu phục vụ nghiên cứu khoa học thông qua thực tế tại doanh nghiệp.</p>	
<p>Nhà trường có các hoạt động truyền thông và quảng bá hiệu quả nhằm lan tỏa phong trào nghiên cứu khoa học trong sinh viên.</p>	
<p><b>5. Điều kiện thực hiện NCKH (4 biến quan sát)</b></p>	
<p>Môi trường học tập và phong trào nghiên cứu khoa học trong khoa/lớp/ giữa các sinh viên rất tích cực và khuyến khích.</p>	<p>Bùi Thị Lâm và Trần Mai Loan (2022) có hiệu chỉnh theo nghiên cứu định tính</p>
<p>Tôi nhận được sự hướng dẫn và hỗ trợ nhiệt tình, đầy đủ từ các giảng viên trong quá trình định hướng nghiên cứu khoa học.</p>	
<p>Hệ thống thư viện và các thiết bị phòng thí nghiệm của trường đáp ứng đầy đủ nhu cầu học tập và nghiên cứu khoa học của tôi.</p>	
<p>Mức kinh phí hỗ trợ dành cho một dự án nghiên cứu khoa học là phù hợp để tôi có thể triển khai nghiên cứu.</p>	

**6. Ý định tham gia NCKH của sinh viên (5 biến quan sát)**

Tôi có kế hoạch rõ ràng để tham gia vào các hoạt động nghiên cứu khoa học trong thời gian tới.	Bùi Thị Lâm và Trần Mai Loan (2022); Nguyễn Thị Khánh Phương và cộng sự (2024) có hiệu chỉnh theo nghiên cứu định tính
Tôi chắc chắn sẽ chủ động tìm kiếm cơ hội để tham gia nghiên cứu khoa học trong tương lai gần.	
Khả năng tôi sẽ tham gia nghiên cứu khoa học trong học kỳ/năm học tới là rất cao	
Tôi xem việc tham gia nghiên cứu khoa học là một trong những ưu tiên hàng đầu trong quá trình học tập của mình.	
Tôi sẵn lòng dành thời gian và công sức cần thiết để thực hiện một dự án nghiên cứu khoa học.	

(Nguồn: tác giả tổng hợp và nghiên cứu)

**2.2. Phương pháp nghiên cứu**

Phương pháp định tính được sử dụng để xây dựng bản câu hỏi khảo sát. Sau đó tác giả tiến hành việc thu thập và phân tích dữ liệu định lượng.

Kích thước mẫu, Theo Hair và cộng sự (2009) cũng đề xuất tối thiểu là 5 mẫu trên 1 biến quan sát. Với 27 thang đo, cần ít nhất 135 (27×5) bản khảo sát. Tác giả thực hiện

khảo sát 350 sinh viên.

Đối tượng khảo sát: Dữ liệu định lượng được thu thập thông qua khảo sát bảng hỏi trực tiếp sinh viên cuối kỳ 2 đang học Trường CĐ Đà Lạt từ tháng 3 - 4 năm 2025 và áp dụng kỹ thuật lấy mẫu thuận tiện phân bổ theo số lượng sinh viên các ngành đảm bảo có tính đại diện theo ngành học:

**Bảng 2. Đối tượng khảo sát**

Khoa	Số lượng sinh viên
Khoa Công nghệ Thông tin	50
Khoa Điện – Điện tử	50
Khoa Cơ khí Động lực	50
Khoa Công nghệ Sinh học	50
Khoa Du lịch	50
Khoa Kinh tế	50
Khoa Ngoại ngữ	50

Thang đo nghiên cứu: Gồm các câu hỏi (biến quan sát) tương ứng với các thang đo sử dụng trong nghiên cứu thang đo Likert 5 mức độ. Đây là một dạng các câu hỏi dùng để đo lường mức độ đồng ý hay không đồng ý của các đối tượng nghiên cứu với những

phát biểu được thiết kế sẵn. Phần này được chia làm hai phần, một phần nêu ra các phát biểu và mã hoá các biến quan sát, phần còn lại đưa ra các mức độ từ “hoàn toàn đồng ý” đến “hoàn toàn không đồng ý”. Tương ứng với mỗi phát biểu, đối tượng được phỏng

vấn đánh dấu tròn vào lựa chọn tương ứng.

Dữ liệu được xử lý và phân tích trên SPSS phiên bản 20 theo quy trình sau: Đánh giá độ tin cậy thang đo, Phân tích nhân tố khám phá (EFA), Phân tích tương quan và Phân tích hồi quy đa biến

### 3. KẾT QUẢ VÀ THẢO LUẬN

#### 3.1. Kết quả nghiên cứu

Với 329 bản khảo sát thu về hợp lệ (/ 350 bản khảo sát phát ra) được đưa vào nghiên

cứu. Kết quả như sau:

##### 3.1.1. Đo lường độ tin cậy thang đo

Trên cơ sở nghiên cứu đánh giá độ tin cậy của 27 biến quan sát, tác giả loại các biến: TDNC3 (Thái độ NCKH), cùng với CSNT4 và CSNT5 (Chính sách NCKH) không thỏa mãn tiêu chí tin cậy của thang đo. Hệ số Cronbach's Alpha của cả 6 nhóm nhân tố đều > 0,6 và 24 biến quan sát còn lại đáp ứng yêu cầu được tóm tắt như sau:

**Bảng 3. Kết quả phân tích độ tin cậy**

STT	Nhóm	Số biến quan sát	Hệ số Cronbach's Alpha
1	Thái độ NCKH	3	0,896
2	Điều kiện thực hiện NCKH	4	0,741
3	Chính sách NCKH	3	0,686
4	Nhận thức về lợi ích của NCKH	5	0,863
5	Năng lực NCKH	4	0,791
6	Ý định tham gia NCKH	5	0,909

(Nguồn: Phân tích dữ liệu nghiên cứu)

##### 3.1.2. Đánh giá thang đo bằng phân tích nhân tố EFA

(1) Thực hiện phân tích nhân tố với các biến độc lập

Phân tích EFA được thực hiện với 19 biến quan sát độc lập còn lại sau bước kiểm định Cronbach's Alpha. Kết quả thể hiện:

hệ số KMO đạt 0,806 (> 0,5) cùng với Sig (Bartlett) = 0,000 cho thấy dữ liệu đáp ứng yêu cầu để tiến hành phân tích, 19 biến quan sát hình thành năm nhóm với Eigenvalue >1, phương sai trích giải thích 66,225% (> 50%) sự thay đổi của tập dữ liệu. Kết quả chi tiết như sau:

**Bảng 4. Ma trận các thành phần xoay (Rotated Component Matrix) cho biến độc lập**

	Nhóm				
	1	2	3	4	5
NTLI4	0,809				
NTLI3	0,791				
NTLI5	0,762				
NTLI1	0,748				
NTLI2	0,733				
NL4		0,796			

NL3	0,730			
NL1	0,727			
NL2	0,687			
TDNC4		0,928		
TDNC1		0,925		
TDNC2		0,829		
DKTH4			0,858	
DKTH3			0,770	
DKTH1			0,652	
DKTH2			0,542	
CSNT2				0,730
CSNT3				0,726
CSNT1				0,688

(Nguồn: Phân tích dữ liệu nghiên cứu)

**(2) Phân tích nhân tố các biến quan sát thuộc nhóm biến phụ thuộc**

Phân tích EFA được thực hiện với 5 biến quan sát. Kết quả cho thấy hệ số KMO đạt 0,811 (> 0,5) cùng với Sig (Bartlett) = 0,000

cho thấy dữ liệu đáp ứng yêu cầu để tiến hành phân tích, 5 biến quan sát hình thành một nhóm với Eigenvalue >1, phương sai trích giải thích 73,559% (> 50%) sự thay đổi của tập dữ liệu. Kết quả chi tiết như sau:

**Bảng 5. Kết quả phân tích yếu tố Ý định**

	Hệ số tải
YD5	0,931
YD3	0,928
YD2	0,824
YD4	0,815
YD1	0,784

(Nguồn: Phân tích dữ liệu nghiên cứu)

Phân tích EFA không có biến nào bị loại bỏ. Nghiên cứu giữ lại 24 biến quan sát, bao gồm 19 biến đo lường 5 nhân tố độc lập và 5 biến đo lường 1 nhân tố phụ thuộc. Các thang đo đều đạt được tính hội tụ.

**3.1.3. Phân tích tương quan**

Kiểm định mối quan hệ tương quan giữa các yếu tố Thái độ NCKH, Điều kiện thực hiện NCKH tại trường, Chính sách NCKH

của Nhà trường, Nhận thức về lợi ích của NCKH và Năng lực NCKH với Ý định tham gia NCKH của sinh viên đều có mức ý nghĩa thống kê < 0,01 cho thấy các yếu tố Thái độ NCKH, Điều kiện thực hiện NCKH tại trường, Chính sách NCKH của Nhà trường, Nhận thức về lợi ích của NCKH và Năng lực NCKH có tương quan với Ý định tham gia NCKH của sinh viên.

**Bảng 6. Phân tích tương quan**

	NTLI	TD	NL	CSNT	DKTH	YD
Hệ số tương quan	0,423**	0,180**	0,505**	0,739**	0,439**	1
YD Mức ý nghĩa	0,000	0,001	0,000	0,000	0,000	
N	329	329	329	329	329	329

(Nguồn: Phân tích dữ liệu nghiên cứu)

**3.1.4. Phân tích hồi quy**

Kết quả kiểm định mô hình hồi quy bao gồm Thái độ NCKH, Điều kiện thực hiện NCKH tại trường, Chính sách NCKH

của Nhà trường, Nhận thức về lợi ích của NCKH và Năng lực NCKH ảnh hưởng đến Ý định tham gia NCKH của sinh viên (YD) như sau:

**Bảng 7. Kết quả phân tích hồi quy**

Mô hình	Hệ số R	Hệ số R <sup>2</sup>	R <sup>2</sup> điều chỉnh	Sai số chuẩn ước lượng	Trị số thống kê Durbin-Watson
1	,790 <sup>a</sup>	,625	,619	,39579	1,838

Mô hình	Hệ số chưa chuẩn hoá		Hệ số chuẩn hoá	t	Mức ý nghĩa (Sig.)	Đa cộng tuyến	
	Hệ số B	Độ lệch chuẩn	Beta			Dung sai	VIF
(Constant)	-1,233	,237		-5,199	,000		
1 NTLI	,103	,042	,094	2,450	,015	,783	1,277
TD	,048	,031	,056	1,563	,119	,909	1,101
NL	,233	,052	,186	4,522	,000	,688	1,453
CSNT	,791	,056	,574	14,147	,000	,705	1,418
DKTH	,162	,049	,128	3,310	,001	,773	1,294

(Nguồn: Phân tích dữ liệu nghiên cứu)

Hệ số xác định R<sup>2</sup> bằng 0,619 (61,9%), tức mô hình hiện tại giải thích 61,9% phương sai của ý định tham gia NCKH; Kiểm định ANOVA cho thấy F = 107,480 với Sig. = 0,000 (< 0,05), bác bỏ H<sub>0</sub> (R<sup>2</sup> tổng thể = 0), chứng minh mô hình hồi quy đạt ý nghĩa thống kê và phù hợp với toàn bộ mẫu nghiên cứu; Với hệ số Durbin-Watson = 1,838 (trong khoảng 1-3), cho

thấy không tồn tại tự tương quan phần dư và tất cả VIF < 10 nên loại trừ nguy cơ đa cộng tuyến.

Theo Bảng 7: Yếu tố Thái độ NCKH (TDNC) có mức ý nghĩa = 0,119 (> 0,05), cho thấy Thái độ NCKH (TDNC) không ảnh hưởng đến Ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt.

Với mức ý nghĩa  $< 0,05$  thì Điều kiện thực hiện NCKH tại trường, Chính sách NCKH của Nhà trường, Nhận thức về lợi ích của NCKH và Năng lực NCKH có ảnh hưởng đến Ý định tham gia NCKH của sinh viên (YD) Trường Cao đẳng Đà Lạt. Kết quả được thể hiện qua phương trình sau:

$$YD = 0,094*NTLI + 0,186*NL + 0,574*CSNT + 0,128*DKTH$$

### 3.1.5. Kiểm định sự khác biệt về ý định tham gia NCKH của sinh viên (YD) giữa các Khoa

Phân tích phương sai ANOVA để xem xét sự khác biệt về Ý định tham gia NCKH của sinh viên (YD) theo các Khoa. Kết quả của bảng Test of Homogeneity of Variances cho thấy mức ý nghĩa Sig =  $0,167 > 0,05$ , vậy ta có thể chấp nhận giả thuyết  $H_0$  rằng phương sai của hai tổng thể bằng nhau, hay có thể nói phương sai của Ý định tham gia NCKH của sinh viên (YD) giữa 7 Khoa không khác nhau một cách có ý nghĩa thống kê. Như vậy, kết quả phân tích ANOVA có thể sử dụng được.

Theo kết quả phân tích ANOVA, mức ý nghĩa Sig =  $0,012 < 0,05$  nên ta có thể kết luận có sự khác biệt có ý nghĩa thống kê về Ý định tham gia NCKH của sinh viên (YD) giữa 7 Khoa trong trường Cao đẳng Đà Lạt.

### 3.2. Thảo luận kết quả nghiên cứu

Dựa trên kết quả phân tích hồi quy, mức độ tác động của các yếu tố đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt được xác định theo thứ tự giảm dần (dựa trên  $\beta$ ): Chính sách NCKH Nhà trường ( $\beta = 0,574$ ), Năng lực NCKH ( $\beta = 0,186$ ), Điều kiện thực hiện NCKH tại trường ( $\beta = 0,128$ ) và Nhận thức về lợi ích của NCKH ( $\beta = 0,094$ ). Yếu tố Thái độ NCKH (TDNC) không ảnh hưởng đến ý định tham gia NCKH của sinh viên.

Kết quả này khẳng định rằng Chính sách NCKH của Nhà trường là yếu tố có ảnh hưởng mạnh mẽ nhất đến ý định tham gia NCKH của sinh viên. Điều này nhấn mạnh vai trò thiết yếu của các chính sách hỗ trợ và khuyến khích chính thức từ cấp độ tổ chức trong việc thúc đẩy sinh viên tham gia các hoạt động nghiên cứu. Tiếp theo là Năng

lực NCKH của sinh viên, cho thấy tầm quan trọng của việc trang bị cho sinh viên những kiến thức và kỹ năng cần thiết để họ cảm thấy tự tin và có khả năng thực hiện NCKH. Điều kiện thực hiện NCKH tại trường và Nhận thức về lợi ích của NCKH cũng là những yếu tố có tác động tích cực, mặc dù mức độ ảnh hưởng thấp hơn so với Chính sách Nhà trường và Năng lực.

Đáng chú ý là yếu tố Thái độ NCKH của sinh viên không cho thấy tác động đến ý định tham gia NCKH của sinh viên là một điểm khác biệt so với một số nghiên cứu của Bùi Thị Lâm và Trần Mai Loan (2022). Sự khác biệt này có thể xuất phát từ đặc thù của sinh viên Trường Cao đẳng Đà Lạt hoặc bối cảnh cụ thể của nghiên cứu, nơi các yếu tố mang tính cấu trúc (chính sách, điều kiện) và khả năng nội tại (năng lực) có thể chi phối mạnh mẽ hơn so với thái độ cá nhân thuần túy trong việc hình thành ý định tham gia NCKH. Điều này gợi ý rằng đối với nhóm đối tượng này, việc tạo ra môi trường thuận lợi và củng cố năng lực thực hành có thể quan trọng hơn việc chỉ tập trung vào việc tạo dựng thái độ tích cực ban đầu.

Nghiên cứu này ủng hộ nghiên cứu của Nguyễn Thị Khánh Phương và cộng sự (2024) là xác định ý định thực hiện NCKH của sinh viên chịu tác động bởi nhận thức về lợi ích của NCKH, Chính sách NCKH của Nhà trường và Năng lực NCKH của sinh viên. Nghiên cứu này cũng ủng hộ nghiên cứu của Bùi Thị Lâm và Trần Mai Loan (2022) xác định các nhân tố ảnh hưởng đến ý định tham gia NCKH của sinh viên Chính sách NCKH của Nhà trường, Năng lực NCKH và Điều kiện thực hiện NCKH tại trường.

## 4. KẾT LUẬN VÀ HÀM Ý QUẢN TRỊ

Nghiên cứu này đã thành công trong việc xác định 4 yếu tố có tác động đáng kể đến ý định tham gia NCKH của sinh viên Trường Cao đẳng Đà Lạt, bao gồm: Nhận thức về lợi ích của NCKH, Năng lực NCKH, Điều kiện thực hiện NCKH tại trường và Chính sách NCKH của Nhà trường. Để phát triển hoạt động NCKH tại trường, tác giả đưa ra một số hàm ý sau:

### **(1) Đối với nhóm yếu tố Chính sách NCKH của Nhà trường, Trường Cao đẳng Đà Lạt nên:**

Một là, Xây dựng và truyền thông chính sách khen thưởng rõ ràng, hấp dẫn: Để sinh viên có động lực tham gia, Trường Cao đẳng Đà Lạt cần thiết lập một hệ thống khen thưởng rõ ràng, minh bạch và đủ sức hấp dẫn. Điều này bao gồm việc công bố công khai các tiêu chí đánh giá, hình thức khen thưởng (tiền mặt, học bổng, ưu tiên xét tốt nghiệp, giấy khen, cơ hội công bố bài viết, v.v.) và quy trình xét duyệt.

Hai là, Tăng cường hỗ trợ tài chính và nguồn lực nghiên cứu: Nghiên cứu khoa học thường đòi hỏi chi phí và tài nguyên. Trường cần cung cấp các chương trình hỗ trợ tài chính linh hoạt và nguồn lực cần thiết cho các dự án nghiên cứu của sinh viên. Việc đơn giản hóa thủ tục xin cấp kinh phí và nguồn lực, cùng với việc công bố các dự án đã được tài trợ, sẽ khuyến khích sinh viên tự tin hơn khi đề xuất ý tưởng và thực hiện nghiên cứu của mình.

Ba là, Phát triển cơ chế khuyến khích giảng viên hướng dẫn: Vai trò của giảng viên là then chốt trong việc định hướng và hỗ trợ sinh viên. Trường Cao đẳng Đà Lạt nên xây dựng các cơ chế khuyến khích giảng viên tích cực tham gia hướng dẫn nghiên cứu khoa học của sinh viên. Điều này có thể bao gồm việc tính điểm nghiên cứu khoa học sinh viên vào việc ưu tiên trong việc xét các danh hiệu thi đua.

### **(2) Đối với nhóm yếu tố Điều kiện thực hiện NCKH tại trường, Trường Cao đẳng**

### **Đà Lạt nên:**

Một là, Xây dựng môi trường NCKH năng động và kết nối: Để thúc đẩy sinh viên chủ động nghiên cứu khoa học (NCKH), Trường Cao đẳng Đà Lạt cần kiến tạo môi trường học tập và NCKH tích cực từ cấp khoa đến lớp học. Điều này bao gồm tổ chức các câu lạc bộ, diễn đàn, cuộc thi khoa học và buổi chia sẻ kinh nghiệm. Khuyến khích tương tác, làm việc nhóm sẽ lan tỏa tinh thần NCKH, tạo cộng đồng hỗ trợ.

Hai là, Nâng cao chất lượng và tính sẵn sàng của công tác hướng dẫn: Sự hỗ trợ của giảng viên là cực kỳ quan trọng đối với nghiên cứu khoa học của sinh viên. Nhà trường cần đảm bảo giảng viên có đủ thời gian, kinh nghiệm và nhiệt huyết để hướng dẫn. Có thể giảm tải giờ dạy, tổ chức các khóa bồi dưỡng về phương pháp hướng dẫn và thiết lập cơ chế công nhận.

Ba là, Tăng cường đầu tư vào hệ thống hạ tầng nghiên cứu. Điều này bao gồm việc nâng cấp thư viện với nguồn tài liệu đa dạng, cập nhật (cả bản cứng và bản điện tử) và trang bị phòng thí nghiệm hiện đại, đảm bảo thiết bị luôn sẵn sàng sử dụng. Việc đào tạo sinh viên về cách sử dụng hiệu quả các tài nguyên này cũng rất quan trọng.

Bốn là, Đảm bảo mức kinh phí hỗ trợ NCKH phù hợp và minh bạch: Nhà trường nên xây dựng quỹ hỗ trợ với mức kinh phí phản ánh đúng chi phí thực tế của đề tài. Quy trình xét duyệt và cấp phát kinh phí phải đơn giản, minh bạch, giúp sinh viên dễ dàng tiếp cận. Việc công bố các dự án được tài trợ sẽ khuyến khích thêm nhiều sinh viên tham gia.

### **(3) Đối với nhóm yếu tố Năng lực NCKH của sinh viên, Trường Cao đẳng Đà Lạt nên:**

Một là, Nâng cao kiến thức và kỹ năng nền tảng qua chương trình học: Để sinh viên tự tin vào khả năng tiếp thu, nhà trường cần lồng ghép và tăng cường các môn học,

chuyên đề về phương pháp nghiên cứu, tư duy phân biện, và kỹ năng mềm ngay từ những năm đầu. Các khóa học này không chỉ cung cấp kiến thức mà còn giúp sinh viên làm quen với quy trình nghiên cứu, từ đó cảm thấy tự tin hơn khi bắt đầu.

Hai là, Tổ chức các buổi hội thảo, chuyên đề và tập huấn: Để củng cố niềm tin vào khả năng hoàn thành dự án, Trường Cao đẳng Đà Lạt nên thường xuyên tổ chức các buổi workshop thực hành về kỹ năng nghiên cứu, phân tích dữ liệu và viết báo cáo. Đồng thời, khuyến khích các dự án nghiên cứu nhỏ, ngắn hạn để sinh viên có cơ hội tham gia vào nghiên cứu và trải nghiệm thành công ban đầu.

Ba là, Khuyến khích tư duy sáng tạo và định hướng phát triển ý tưởng từ sớm cho sinh viên: Để thúc đẩy khả năng phát triển ý tưởng độc đáo, nhà trường cần tạo ra môi trường mở khuyến khích tư duy sáng tạo và tranh luận học thuật. Các cuộc thi ý tưởng nghiên cứu, diễn đàn khoa học sinh viên định kỳ có thể là nơi sinh viên trình bày và nhận góp ý cho các ý tưởng ban đầu, từ đó ươm mầm cho những đề tài chuyên sâu hơn.

#### **(4) Đối với nhóm yếu tố Nhận thức về lợi ích của NCKH của sinh viên, Trường Cao đẳng Đà Lạt nên:**

Một là, Nhấn mạnh và minh họa cụ thể việc phát triển tư duy và kỹ năng giải quyết vấn đề: Trường cần tổ chức các buổi hội

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Tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

thảo, chia sẻ kinh nghiệm từ sinh viên đã tham gia NCKH, hoặc đưa vào các môn học những ví dụ thực tiễn về cách NCKH giúp rèn luyện tư duy logic và kỹ năng giải quyết vấn đề. Khi sinh viên thấy được lợi ích trực tiếp này, họ sẽ có động lực hơn.

Hai là, Hỗ trợ kỹ năng viết báo cáo khoa học: Tổ chức các khóa tập huấn chuyên sâu về viết báo cáo khoa học, chuyên đề, và khóa luận tốt nghiệp, đồng thời khuyến khích giảng viên lồng ghép kỹ năng này vào các môn học chuyên ngành. Hỗ trợ sinh viên trong quá trình này sẽ giúp họ tự tin hơn khi thực hiện các công trình nghiên cứu.

Ba là, Quảng bá các cơ hội giải thưởng và công bố công trình: Trường nên chủ động quảng bá rộng rãi các giải thưởng NCKH uy tín (cấp trường, cấp bộ, quốc gia) và cơ hội công bố bài viết trên các tạp chí khoa học. Lập danh sách các tạp chí phù hợp cho sinh viên, tổ chức các buổi giới thiệu quy trình nộp bài, và vinh danh công khai các sinh viên đạt giải để tạo động lực.

Bốn là, Đặt ra chính sách cộng điểm khuyến khích thành tích học tập: Triển khai chính sách cộng điểm rõ ràng và hấp dẫn cho sinh viên tham gia NCKH, đặc biệt là những đề tài có chất lượng hoặc đoạt giải. Điều này không chỉ khuyến khích mà còn giúp sinh viên nhận thấy NCKH có ảnh hưởng tích cực đến kết quả học tập tổng thể của mình.

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# FACTORS AFFECTING STUDENTS' INTENTION TO PARTICIPATE IN SCIENTIFIC RESEARCH AT DA LAT COLLEGE

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**Abstract:** *The study utilized a qualitative approach for scale development and a quantitative approach for model validation. The data were collected through a survey of students at Dalat College and analyzed using SPSS version 20 for statistical analysis. The regression analysis revealed four key factors influencing students' intention to engage in scientific research at Dalat College. These factors, ranked in ascending order of impact, include: perceived benefits of scientific research ( $\beta = 0.094$ ), institutional research conditions ( $\beta = 0.128$ ), students' competence ( $\beta = 0.186$ ), and institutional policy support ( $\beta = 0.574$ ). In addition to empirically validating theoretical models, the study also offers practical insights to assist Dalat College in formulating appropriate management policies aimed at encouraging student participation in research activities.*

**Keywords:** *Da Lat College, factor affecting, intention to participate in scientific research, research, student*

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## **Note**

The author declares no competing interests.

# AN ANALYSIS OF REFUSAL SPEECH ACTS USED BY VOCATIONAL STUDENTS AT A VIETNAMESE COLLEGE

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**Abstract:** Refusal is considered one of the most frequently performed speech acts in people's daily lives. However, making a speech act of refusal is a challenge, especially for non-native English speakers, due to the possibility of losing other people's face and corrupting interlocutors' interactions. This study investigates how Vietnamese vocational students make the speech act of refusal to invitations, offers, suggestions, and requests. Participants of this study are 18 Vietnamese vocational students who are studying English as a second language (L2). They were asked to complete a Written Discourse Completion Task containing 12 scenarios, including 3 invitations, 3 offers, 3 suggestions, and 3 requests in higher, equal, and lower interlocutor status. Collected data were then analyzed using the classification of refusal strategies proposed by Beebe et al. (1990). The findings show that indirect strategies are preferred by Vietnamese vocational students, which can mitigate the risk of losing other people's face. The findings also reveal that Vietnamese vocational students tend to use different combinations of indirect strategies, adjuncts to refusals, and direct strategies to produce speech act sets. In addition, the interlocutor status does not influence the refusal strategies that Vietnamese vocational students choose.

**Keywords:** refusal strategies, semantic formulas, speech acts, Vietnamese vocational students

## 1. INTRODUCTION

Human beings have been living in a world of language where they use words in every moment of life. Hence, it can be claimed that language is used as a means of communication that helps people express their feelings or their thoughts. They can talk to everyone, to their pets, and even to themselves. To achieve good and effective communication, people need to not only know a language but also realize how to use it in an appropriate way. Using a language does not mean that people just put words they know in a certain order to form a lexical string. Competent language users must know how to follow essential conventions to produce meaningful and contextually appropriate utterances. In addition, it is vital for language users to understand their interlocutors' intentions when engaging in various modes of communication so that

breakdowns can be avoided. In other words, both linguistic and pragmatic knowledge are required in communication so that interlocutors can understand conveyed meaning (Brown & Levinson, 1987). Pragmatic knowledge, in this case, can be understood as the ability to use language in communication in connection with the relationships between words or sentences and the contexts in which they occur (Jafari, 2014). Hence, people should obtain the ability to understand the intended meaning in utterances produced by their interlocutors so that meaningful conversations can be made. To achieve this, people must know how to use speech acts, such as making promises, offering apologies, asking questions, or refusing, successfully (Kasper & Rose, 2001).

Among speech acts, refusals are considered the most complicated action due

to their sensitive and complicated manner. Refusal may risk the positive or negative face of interlocutors, which makes them become face-threatening acts (FTA) since the action of refusal normally results in conflict with the communicative purposes of both parties involved in the information exchange. In other words, the act of refusing may breach the relational expectations from those who make invitations, requests, or offers. Meanwhile, people who receive refusals may experience the feeling of failing to select suitable interlocutors (Krulatz & Dixon, 2020). Therefore, a speaker should achieve harmonization between politeness and clarity so that the refusal message can be conveyed, and the risk of face can be reduced (Chang, 2009). In terms of linguistic aspects, semantic formulas are required when making a speech act of refusal because they can help a speaker to avoid taking offense and to save face as well. The choice of used semantic formulas for refusals, however, is influenced by various social factors such as the status of interlocutors, power, educational background, age, or gender (Felix-Brasdefer, 2006). Cultural background, in addition to the previously mentioned factors, also affects the production of refusal (Al-Kahtani, 2005). People from different cultures may use refusal in different ways. Pragmatic transfer from their mother language influences the use of refusals by non-native English speakers (Farnia & Wu, 2012; Wannaruk, 2008).

From the discussion above, it can be claimed that making a speech act of refusal is a challenge, especially for non-native English speakers, due to the possibility of losing other people's face and corrupting interlocutors' interactions. To mitigate the negative effects of refusals, interlocutors must have sufficient knowledge to produce polite and effective refusals. In Vietnam, where Vietnamese is the dominant language and English is being taught as a foreign

language, students' opportunities to use it outside their classrooms are somewhat limited. Therefore, it is vital to investigate how Vietnamese students make refusals in different situations. This study aims to explore the types of refusal strategies used by Vietnamese vocational students and the effect of interlocutor status on their refusals.

## 2. LITERATURE REVIEW

Speech Act Theory, which is a fundamental concept in pragmatics, reveals that language can function not merely to convey information but also to perform actions. Initially proposed by Austin (1962) in his seminal work "How to Do Things with Words," this theory challenged the traditional view of language since it introduced the idea that changes in communicative purposes can be enacted by utterances through speech itself. There are three different types of acts that are distinguished, namely the locutionary act (the act of saying something with specific meaning), the illocutionary act (the intended function of utterances), and the perlocutionary act (how a listener is affected by an utterance).

From Austin's foundation, Searle (1969) developed the concept of illocutionary force, which refers to specific communicative purposes behind utterances. He classified speech acts into five categories, including *assertives* (statements of facts), *directives* (get a listener to do something), *commissives* (future actions), *expressives* (feelings or attitudes), and *declarations* (changes in external situations). In terms of linguistic properties, the speech of refusal is a type of *commissive* as the speaker does not perform an action proposed by another.

Refusal is a complex and culturally nuanced speech act that functions as a negative counterpart to acceptance in communication. Searle and Vanderveken (1985) defined refusal as the act of declining offers, requests, or invitations. Like other speech acts, refusals generally

occur across languages, but they vary significantly in social acceptability and form due to linguistic and cultural context. Al-Eryani (2007) stated that refusal constitutes a negative reply to an invitation, suggestion, offer, and request. Similarly, Martínez-Flor and Usó-Juan (2011) argued that refusal is a disfavored and complex response to initial acts, including requests, offers, or invitations. Owing to the fact that acceptance is preferred, refusals can threaten the positive face of the interlocutor in communication. Therefore, a high level of pragmatic competence is required to perform appropriate refusals in various contexts.

Refusals, or the speech act of declining an offer, invitation, or request, are highly influenced by cultural and social factors. The way someone says "no" can vary significantly across different societies and interpersonal relationships. Regarding social factors, the social distance and power dynamics between interlocutors also play a crucial role. Speakers are more likely to use direct refusals when interacting with close friends or individuals of lower social status, but they tend to use more indirect and elaborate strategies when refusing a request from a boss, an elder, or a person of higher social standing (Beebe & Takahashi, 1989). With respect to cultural aspects, research has shown that the types of strategies, the frequency of their use, and their perceived politeness differ greatly among cultures. For instance, in American English, a speaker might use a direct refusal followed by an explanation, while in some other cultures, the explanation would precede the refusal, and the refusal itself might not even be explicitly stated (Al-Kahtani, 2005). These variations highlight the importance of understanding the socio-cultural norms of a particular community to effectively communicate and avoid misinterpretation.

There are three types of refusal studies,

including intra-lingual studies, which examine refusals within a single culture or language; cross-cultural studies, which analyze refusals across multiple cultures or languages; and learner-centered studies, which investigate how language learners acquire and employ refusals in various linguistic and cultural contexts. Cross-cultural studies have predominantly explored refusals among these three types. This viewpoint is proven by the considerable amount of research into the use of refusals of language users from two or more languages or cultures (Lyuh, 1992; Chen, 1996; Nelson et al., 2002; Al-Kahtani, 2005; Al-Issa, 2003; Hashemian, 2012; Amirrudin & Salleh, 2016). These studies' results consistently demonstrated that refusal behaviors vary across cultures.

Meanwhile, the number of studies on learner-centered refusals remains limited. Zhao and Nor (2016) studied refusals produced by Chinese EFL speakers in a Malaysian university and reported that indirect refusals were preferred. Results from their study also showed that the use of refusals of participants was influenced by various factors, including power, distance, and social context. Khamkhien (2022) investigated the refusal strategies employed by Thai university students, exploring the potential influence of their first language and cultural background. Findings from his study revealed that indirectness was preferred and there was a frequently used combination of direct and indirect strategies. Furthermore, social status and social-cultural factors influenced the refusal strategies employed by Thai university students. The study by Fang (2024) revealed that Chinese English speakers frequently employed indirect refusal strategies, including providing explanations, offering alternatives, and making apologies. In another context, Han and Burgucu-Tazegül (2016) investigated how Turkish undergraduates used refusals

in English. Their study revealed the dominance of indirect refusals and the presence of pragmatic transfers from the participants' mother language. In the context of Vietnam, there is less research on refusal in the framework of learner-centered studies. Nguyen (2017) carried out a study on how power had influence on refusal strategies to requests made by Vietnamese EFL learners at their workplace. The findings showed that there was a significant difference in the utilization of refusal strategies based on social status. Tuyen (2024) conducted a study on how Vietnamese university students used refusals in their daily life. The results showed that the participants normally employed indirect refusals due to social contexts, distance, and culture. Duc et al. (2024) carried out an investigation into the use of refusals of English-majored students at a university in Vietnam. The findings revealed that Vietnamese culture influenced the way these students made refusals in English. However, no research has yet examined the use of English refusals by Vietnamese vocational students. Hence, this study aims to fill this gap by exploring how refusals are used by Vietnamese vocational college students as well as whether their refusals are influenced by interlocutor status. To accomplish this, we must address the following research questions:

1. Which refusal strategies do vocational students at a Vietnamese college utilized?
2. How does interlocutor status have an effect on the selection of refusal strategies utilized by vocational students at a

Vietnamese college?

### 3. METHODOLOGY

Eighteen vocational students who are studying at a vocational college located in the Central Highlands of Vietnam volunteered to participate in the study. Of these, 9 were males and 9 were females who were studying different majors, including Plant Protection, Cooking, Civil Electricity, Accounting, and Automobile Maintenance. Their ages ranged from 19 to 22 and they were all second-year students. The aim of this choice is to make sure that all participants completed the course named Basic English taught in their first year, which equipped them with enough knowledge of English to use in communication. In addition, they all speak Vietnamese as their first language.

For data collection, a written Discourse Completion Task (WDCT) which was originally proposed by Beebe et al. (1990) was utilized. DCT was selected because it is a widely used research instrument in pragmatics, which helps elicit both spoken and written language in a controlled manner (Kasper & Dahl, 1991). Participants are presented short descriptions of social situations and asked to provide natural responses. In this study, the DCT was modified with some changes to suit the Vietnamese context. 12 selected situations were included with the aim of eliciting the speech act of refusal of invitations, suggestions, offers, and requests (see Appendix 1). Besides, the DCT was designed to make refusals to lower, higher, and equal social status as shown in Table 1.

**Table 1. Situations of refusals**

Items	Stimulus types	Interlocutors	Scenarios	The Social status of interlocutors
1	Refusal of invitation	A classmate	Invite you to go to the cinema.	Equal
2	Refusal of offer	A best friend	Offer to give you some money.	Equal

3	Refusal of suggestion	A friend	Suggest trying braised tuna.	Equal
4	Refusal of request	A friend	Asking to borrow your motorbike.	Equal
5	Refusal of offer	A teacher	Offer to give you a ride.	Higher
6	Refusal of request	A senior student	Asking to borrow your English coursebook.	Higher
7	Refusal of invitation	A teacher	Invite you to have lunch.	Higher
8	Refusal of suggestion	An advisor	Suggest a startup idea that you are not interested in.	Higher
9	Refusal of request	A younger roommate	Ask for help with some English exercises.	Lower
10	Refusal of invitation	A junior student	Invite you to her birthday party.	Lower
11	Refusal of suggestion	A younger friend	Suggest visiting a new Thai restaurant.	Lower
12	Refusal of offer	A junior student	Offer to pay for an ice cream.	Lower

After receiving DCT questionnaires, all participants were asked to read all situations carefully. Then, they were given sufficient time to write down their responses. Next, 18 WDCTs were coded as S1, S2 to S18. A total of 216 responses to refusal were collected from 18 participants. The retrieved data were qualitatively analyzed based on Beebe et al.'s (1990) classification of refusal strategies (see Appendix 2). In the first phase of data analysis, all responses were coded as direct refusals (refusing directly without hesitation), indirect refusals (refusing in an indirect way), and adjuncts to refusals (additional statements to direct or indirect refusals). From there, types and frequencies of refusals used by participants could be explored. In the second phase, semantic formulas of all refusal strategies regarding interlocutors' status were examined with

the aim of identifying whether social status influenced on refusal strategies.

## 4. FINDINGS AND DISCUSSION

### 4.1 Types of refusal strategies

18 Vietnamese vocational students produced 390 refusal strategies in total, across 216 responses in 12 different situations. Based on the framework proposed by Beebe et al. (1990), collected refusals were categorized into three groups, namely direct refusals, indirect refusals, and adjuncts to refusals. The results indicated that most of the Vietnamese vocational students preferred employing indirect strategies in refusals (250 occurrences, or 64.1%), followed by adjuncts to refusals (97 occurrences, or 24.87%), and direct strategies (43 occurrences, or 11.03%).

**Table 2. Types, frequency, and percentage of refusal strategies**

Refusal strategies	Semantic formulas	Frequency	Percentage
<i>Direct refusals</i>	Negative willingness/ ability	43	11.03
	Statements of regret	39	10
<i>Indirect refusals</i>	Wishes	1	0.26
	Excuses, reasons, explanations	120	30.77
	Statements of alternative	63	16.15
	Setting a condition for future or past acceptance	1	0.26
	Promises of future acceptance	21	5.38
	Statement of principle	2	0.51
	Avoidance	3	0.77
	Statements of positive opinion/feeling or agreement	21	5.38
<b>Adjuncts to refusals</b>	Gratitude/appreciation	76	19.49
	<b>Total</b>	<b>390</b>	<b>100</b>

#### 4.1.1 Direct strategies

Among three direct refusals proposed by Beebe et al. (1990), there was only *negative willingness/ability* found with 43 occurrences, or 11.03%. In most cases, *negative willingness/ability* strategies were accompanied by indirect strategies, including *a statement of regret, a statement of alternative, a promise of future acceptance, and an excuse/ reason/explanation* (see examples 1 and 2).

(1) I'm sorry [*statement of regret*]. This weekend, I can't go with you [*negative willingness/ability*]. See you next time [*promise of future acceptance*]. (S16, situation 1)

(2) I'm sorry [*statement of regret*], but I can't help you right now [*negative willingness/ability*] because I'm busy with

my homework [*excuse/reason/explanation*]. Maybe I can help you later [*promise of future acceptance*]. (S12, situation 9)

#### 4.1.2 Indirect strategies

In total, there were found 8 semantic formulas of indirect refusals, including *a statement of regret, wish, excuse/reason/explanation, a statement of alternative, setting a condition for future or past acceptance, a promise of future acceptance, a statement of principle, and wish*. The most frequently used semantic formula is *excuse/reason/explanation*, with 120 occurrences, or 30.77%. It was followed by *a statement of alternative* with 63 occurrences, or 16.15%. The third preferred indirect semantic formula was a statement of regret, with 39 occurrences, or 10%. *A promise of future acceptance* took the fourth position

with 21 occurrences, or 5.38%. Meanwhile, *avoidance, a statement of principle, setting a condition for future or past acceptance,* and *a wish* appeared with low frequencies (3, 1, 1, and 1, respectively). These findings revealed that Vietnamese vocational students know how to use different strategies in an appropriate way to reduce the negative effects of their refusals and effectively preserve good relationships with their interlocutors. When making refusals, they normally deployed two or more semantic formulas in the same response, as shown in the examples below.

(3) I'd love to help [*A statement of positive opinion/feeling or agreement*], but I'm busy with a lot of homework right now [*An excuse/reason/explanation*]. Can we do it later when I'm done with my tasks [*A promise of future acceptance*]? (S11, situation 9)

(4) Thanks for the suggestion [*gratitude/appreciation*], but I don't eat fish [*An excuse/reason/explanation*]. I will eat pork instead [*a statement of alternative*]. (S10, situation 3)

#### 4.1.3 Adjuncts to refusals

With 97 occurrences, or 24.87%, adjuncts to refusals appeared as the second preferred set of strategies. However, there were only two semantic formulas used by Vietnamese vocational students, including *statements of positive opinion/feeling or agreement* (21 occurrences, or 5.38%) and *gratitude/appreciation* (76 occurrences, or 19.49%). This finding revealed that *gratitude/appreciation* was highly preferred by Vietnamese vocational students. They often used *gratitude/appreciation* to start their responses with expressions, such as "Thank you for inviting me" or "Thanks for the suggestion," as shown in the examples below.

(5) Thanks for the suggestion [*gratitude/appreciation*], but I don't like fish [*An excuse/reason/explanation*]. I think I'll order pork

instead [*A statement of alternative*]. (S15, situation 3)

(6) Thank you for inviting me [*gratitude/appreciation*]. I would like to join you [*A statement of positive opinion/feeling or agreement*], but my mom is in the hospital [*An excuse/reason/explanation*]. (S1, situation 7).

Similarly, *statements of positive opinion/feeling or agreement*, which appeared in the smaller frequency, normally took the initial position in participants' responses. For example,

(7) That sounds amazing [*A statement of positive opinion/feeling or agreement*]! But I can't eat spicy food [*An excuse/reason/explanation*]. Are there any non-spicy dishes you think I should try [*A statement of alternative*]? (S10, situation 11)

(8) I'd love to help you [*A statement of positive opinion/feeling or agreement*], but I'm busy with my homework right now [*An excuse/reason/explanation*]. Could we go over it later when I have more time [*A promise of future acceptance*]? (S7, situation 9)

Overall, participants liked to use adjuncts to refusals before starting their main responses. This finding suggests that they know how to acknowledge interlocutors' intent, soften face-saving, and maintain positive relationships.

## 4.2 Refusals to stimulus acts

### 4.2.1 Refusals to invitations

Regarding refusals to invitations, it could be seen that Vietnamese vocational students used more indirect strategies than direct ones. Among indirect strategies, *excuses/reasons/explanations* emerged as the most frequently utilized strategy, with 41 occurrences. Direct strategies, specifically *negative willingness/ability*, were less common with 21 occurrences. In addition, *gratitude/appreciation* was a significant adjunct to refusals, with 20 occurrences. When

refusing a classmate’s invitation to the cinema (situation 1), participants often began their refusals with adjuncts, such as *gratitude/appreciation*, followed by indirect strategies, such as *excuses/reasons/explanations* or *promises of future acceptance* (10 responses or 55.56%). In situation 7, when refusing a teacher’s invitation for lunch, they normally used *gratitude/appreciation* (adjunct), *excuses/reasons/explanations* (indirect), and *negative willingness/ability* (direct) (12 responses or 66.67%). When they refused a junior student’s invitation to her birthday party, indirect strategies, such as *statements of regret* and *excuses/reasons/explanations* were dominantly utilized (10 responses, or 55.56%). Notably, the preference of participants for the use of *excuses/reasons/explanations* may suggest that they tried to

mitigate face-threatening situations through indirectness, thereby preserving the social harmony when making refusals. Examples of how refusals to invitations can be seen below.

(9) Thank you for inviting me [*gratitude/appreciation*], but I’m not feeling well today [*an excuse/reason/explanation*]. Let’s go another day [*A promise of future acceptance*]. (S3, situation 1)

(10) Thank you for the invitation [*gratitude/appreciation*], but I can’t join [*negative willingness/ability*] because I need to be with my mom in the hospital [*An excuse/reason/explanation*]. (S12, situation 7)

(11) Oh, what a pity [*A statement of regret*]! I have an appointment with another friend [*An excuse/reason/explanation*]. (S16, situation 10)

**Table 3. Refusal strategies to invitations**

Refusal strategies	Frequency	Examples
<b>Direct strategies</b>	<b>21</b>	
- Negative willingness/ability	21	<i>I'm afraid I can't make it.</i>
<b>Indirect strategies</b>	<b>67</b>	
- Excuses/reasons/explanations	41	<i>My mom is in the hospital.</i>
- Statements of regret	12	<i>I'm sorry.</i>
- Promises of future acceptance	10	<i>See you next time.</i>
- Statements of alternative	4	<i>I can help you find another copy.</i>
<b>Adjuncts to refusals</b>	<b>24</b>	
- Statements of positive opinion/feeling or agreement	4	<i>That's fine!</i>
- Gratitude/appreciation	20	<i>Thank you for inviting me.</i>

**4.2.2 Refusals to offers**

When refusing offers, Vietnamese vocational students preferred employing indirect strategies (67 occurrences) and adjuncts to refusals (40 occurrences). In terms of indirect strategies, Table 4 shows that they most frequently utilized *statements of alternative* (22 occurrences) and *excuses/reasons/explanations* (19 occurrences). Meanwhile, *gratitude/appreciation* was

their preferable adjunct to refusals, with 39 occurrences. In situation 2 (refusing a best friend's offer to give money), the participants tended to begin their responses with *gratitude/appreciation*, followed by *negative willingness/ability* and *statements of alternative* or *excuses/reasons/explanations*. *Statements of principle* (2 occurrences) and *setting a condition for future or past acceptance* (1 occurrence) were both

deployed in situation 2 to make refusals. The use of the abovementioned semantic formulas can be seen in the examples below.

(12) Thank you for your generosity [*gratitude/appreciation*], but I think I'll ask my parents first [*A statement of alternative*]. If I need help, I'll tell you later [*setting a condition for future or past acceptance*]. (S5, situation 2)

(13) Thank you [*gratitude/appreciation*], but I don't want to borrow money from anyone [*A statement of principle*]. I'll use my mother's old phone [*A statement of alternative*]. (S6, situation 2)

When refusing a teacher's offer to provide a ride (situation 5), Vietnamese vocational students mostly use *gratitude/appreciation*

and *excuses/reasons/explanations* in their responses (15 responses, or 77.78%). However, when refusing a junior student's offer to pay for an ice cream (situation 12), they often used *gratitude/appreciation* to begin their responses, followed by a *statement of alternatives* (13 responses, or 72.22 %). For example:

(14) Thank you [*gratitude/appreciation*]. But I called my father to pick me up already [*An excuse/reason/explanation*]. (S7, situation 5)

(15) Thanks [*gratitude/appreciation*], but I'll go back to my classroom to take my wallet [*A statement of alternative*]. (S6, situation 12)

**Table 4. Refusal strategies to offers**

Refusal strategies	Frequency	Examples
<b>Direct strategies</b>	<b>8</b>	
- Negative willingness/ability	8	<i>I can't go.</i>
<b>Indirect strategies</b>	<b>45</b>	
- Excuses/reasons/explanations	19	<i>But I called my father to pick me up already.</i>
- Statements of regret	1	<i>Sorry.</i>
- Statements of principle	2	<i>I don't want to borrow money from anyone.</i>
- Statements of alternative	22	<i>I think I'll ask my parents first.</i>
- Setting a condition for future or past acceptance	1	<i>If I need help, I'll tell you later.</i>
<b>Adjuncts to refusals</b>	<b>40</b>	
- Statements of positive opinion/feeling or agreement	3	<i>It's alright.</i>
- Gratitude/appreciation	37	<i>Thank you.</i>

#### 4.2.3 Refusals to suggestions

Table 5 below reveals how Vietnamese vocational students refuse suggestions. Indirect strategies were still preferred choices with 61 occurrences, followed by adjuncts to refusals (29 occurrences) and direct strategies (8 occurrences). When refusing a classmate's suggestion to try tuna (situation 3), they often used *gratitude/appreciation* or a *statement of positive*

*opinion/feeling* or *agreement* to begin their responses, then continued with an *excuse/reason/explanation* and a *statement for alternative* (15 responses, or 83,33%). For example:

(16) Thank you [*gratitude/appreciation*], but I don't really like fish [*An excuse/reason/explanation*]. I'll order pork instead [*A statement of alternative*]. (S12, situation 3).

To refuse a startup idea suggested by an advisor (situation 8), most of the participants normally started their responses with *gratitude/appreciation* and ended their responses with *a statement of alternative* (12 responses, or 66.67%). Amazingly, *avoidance* which belongs to indirect strategies could be found in situation 8 with 2 occurrences. They appeared in the form of *topic switch* and *postponement* which reflect that few Vietnamese vocational students can use indirect strategies diversely.

(17) Thank you for your suggestion [*gratitude/appreciation*], but please let me think of it, and I'll make a decision later [*postponement*]. (S5, situation 8)

(18) Thank you for your suggestion [*gratitude/appreciation*], but I hope to

work on something else [*A statement of alternative*]. Could we discuss another topic [*topic switch*]? (S7, situation 8)

However, when refusing a younger classmate's suggestion to visit a new Thai restaurant, participants tended to start their responses with *a statement of positive opinion/ feeling or agreement*, then they gave *an excuse/reason/explanation*, and ended with *a statement of alternative* (14 responses, or 77.78%). For example:

(19) That sounds nice [*statement of positive opinion/feeling or agreement*], but I can't eat spicy food [*An excuse/reason/explanation*]. Do they have non-spicy dishes [*A statement of alternative*]? (S12, situation 11)

**Table 5. Refusal strategies to suggestions**

Refusal strategies	Frequency	Examples
<b>Direct strategies</b>	<b>8</b>	
- Negative willingness/ability	8	<i>I'm afraid I can't.</i>
<b>Indirect strategies</b>	<b>61</b>	
- Excuses/reasons/explanations	28	<i>I can't eat spicy food.</i>
- Statements of regret	2	
- Statements of alternative	28	<i>How about trying pork instead?</i>
- Avoidance	3	<i>I'll make a decision later.</i>
<b>Adjuncts to refusals</b>	<b>29</b>	
- Statements of positive opinion/feeling or agreement	12	<i>That sounds delicious!</i>
- Gratitude/appreciation	17	<i>Thanks for your suggestion.</i>

**4.2.4 Refusals to requests**

Concerning refusals to suggestions, the dominant use of indirect strategies could be observed with 94 occurrences, followed by direct strategies with 6 appearances and adjuncts to refusals with 4 appearances. Taking into account the utilization of indirect strategies, Vietnamese vocational students showed a strong preference for *excuses/reasons/explanations* with 32 occurrences, followed by *statements of regret* with 24

occurrences, *promises of future acceptance* with 11 occurrences, and *statements of alternative* with 9 occurrences. There was one found *wishes* as well. *Negative willingness/ability* was the only type of direct strategy used for refusing suggestions. Similarly, *statements of positive opinion/ feeling or agreement* were the sole kind of adjunct to refusals that could be found.

When refusing a friend asking to borrow their motorbike, participants normally

used *a statement of regret* to start their responses and ended with *an excuse/reason/explanation* (10 responses, or 55.56%) as seen in the example below.

(20) I'm sorry [*A statement of regret*]. My motorbike broke down [*An excuse/reason/explanation*]. I haven't had it repaired yet. (S16, situation 4).

To refuse a senior student asking for borrowing an English coursebook, participants often began their responses with *a statement of regret*, continued with *an excuse/reason/explanation*, and ended with *a statement of alternative* (10 responses, or 55.56%). This type of semantic formulas can be seen in the examples below.

(21) I'm sorry [*A statement of regret*], but I really need this book to study for my exam

next week [*An excuse/reason/explanation*]. I can help you find another copy [*A statement of alternative*]. (S3, situation 6)

Lastly, to refuse a younger roommate asking for help with her English exercises, participants normally used *a statement of positive opinion/feeling or agreement* as initial expressions, followed by *an excuse/reason/explanation*, and ended with *a promise of future acceptance* (12 responses, or 66.67%). For example:

(22) I'd like to help [*A statement of positive opinion/feeling or agreement*], but I'm really busy with my homework now [*An excuse/reason/explanation*]. Can we arrange another time [*A promise of future acceptance*]? (S5, situation 9)

**Table 6. Refusal strategies to requests**

Refusal strategies	Frequency	Examples
<b>Direct strategies</b>	<b>6</b>	
- Negative willingness/ability	6	<i>I can't lend you my motorbike.</i>
<b>Indirect strategies</b>	<b>94</b>	
- Excuses/reasons/explanations	32	<i>I really need this book to study for my exam next week.</i>
- Statements of regret	24	<i>I'm really sorry.</i>
- Statements of alternative	9	<i>Why don't you try asking Nam for help?</i>
- Wishes	1	<i>I wish I had another one.</i>
- Promises of future acceptance	11	<i>I can help you later when I have free time.</i>
<b>Adjuncts to refusals</b>	<b>4</b>	
- Statements of positive opinion/feeling or agreement	4	<i>I'd like to lend you but I...</i>

### 4.3 Interlocutor status and semantic formulas

Table 7 shows the most frequent semantic formulas used by Vietnamese vocational students based on interlocutor statuses. When they refused an interlocutor who had a higher status, they normally used *excuses/reasons/explanations* in combination with other formulas. Specifically, in situation 7 (Invitation), they started their refusals with *gratitude/appreciation*, *excuses/*

*reasons/explanations*, and *negative willingness/ability* in 12 responses (66.67%). Similarly, in situation 5 (Offer), the use of *gratitude/appreciation* and *excuse/reason/explanation* can be observed with 15 occurrences, or 77.78%. Meanwhile, when making refusals to suggestions (situation 8), the combination of *gratitude/appreciation* and a *statement of alternative* can be witnessed in 12 responses. Nonetheless, in situation 6 (Request), most of them deployed

a statement of regret in combination with an of future acceptance (10 responses, or excuse/reason/explanation and a promise 55.56%).

**Table 7. Most frequently used semantic formulas based on interlocutor statuses**

Interlocutor status	Situations	Semantic formulas	Frequency	Percentage
<b>Higher</b>	Invitation (7)	Gratitude/appreciation + an excuse/reason/explanation + negative willingness/ability	12	66.67
	Offer (5)	Gratitude/appreciation + an excuse/reason/explanation	15	77.78
	Suggestion (8)	Gratitude/appreciation + a statement of alternative	12	66.67
	Request (6)	A statement of regret + an excuse/reason/explanation + statement of alternative	10	55.56
<b>Equal</b>	Invitation (1)	A statement of regret + an excuse/reason/explanation + a promise of future acceptance	10	55.56
	Offer (2)	Gratitude/appreciation + negative willingness/ability + a statement of alternative	9	50
	Suggestion (3)	A statement of positive opinion/feeling or agreement + an excuse/reason/explanation + statement of alternative	9	50
	Request (4)	A statement of regret + an excuse/reason/explanation	10	55.56
<b>Lower</b>	Invitation (10)	A statement of regret + an excuse/reason/explanation	10	55.56
	Offer (12)	Gratitude/appreciation + a statement of alternative	13	72.22
	Suggestion (11)	A statement of positive opinion/feeling or agreement + an excuse/reason/explanation + a statement of alternative	14	77.78
	Request (9)	A statement of positive opinion/feeling or agreement + an excuse/reason/explanation + a promise of future acceptance	12	66.67

Situation 1 (Invitation) and situation 4 (Request) exhibit similarities in their refusals, indicating equal status. In situation 1, they preferred using a statement of regret, an excuse/reason/explanation, and a promise of future acceptance in the same response (10 responses or 55.56%). Meanwhile, in situation 4, a statement of regret and excuse/

*reason/explanation* were utilized together. Conversely, in situation 2 (Offer), *gratitude/appreciation*, *negative willingness/ability*, and *a statement of alternative* were employed most frequently (9 responses, or 50%). On the other hand, in situation 3 (Suggestion), the use of *a statement of positive opinion/feeling or agreement*, *excuse/reason/explanation*, and *statement of alternative* could be found in the same frequency.

With respect to refusing people with lower status, they used *a statement of regret* and *an excuse/reason/explanation* (10 responses, or 55.56%) in situation 10 (Invitation). In situation 9 (Request) and situation 11 (Suggestion), they began their responses with *a statement of positive opinion/feeling or agreement*, continued with *an excuse/reason/explanation*, but ended with *a promise of future acceptance* (Request) and *a statement of alternative* (Suggestion) with 12 and 14 responses, respectively. However, in situation 12 (Offer), they preferred *gratitude/appreciation* and *a statement of alternative* (13 responses or 72.22%).

Overall, the abovementioned results indicate that Vietnamese vocational students utilized different combinations of semantic formulas to make refusals to invitations, offers, suggestions, and requests. Among semantic formulas found, *an excuse/reason/explanation* was the most preferable one (found in 9 situations), followed by *a statement of alternative* (found in 6 situations), *gratitude/appreciation* (found in 5 situations), and *a statement of regret* (found in 4 situations). Other formulas, such as *a promise of future acceptance* or *a statement of positive opinion/feeling, or agreement*, were found at lower frequencies. There was only one direct strategy, namely *negative willingness/ability*, found. This, once again, helps claim the dominance of indirect strategies that Vietnamese vocational students used for making refusals. In addition, negative willingness/ability was

used to refuse an invitation from a person who had a higher status. Considering the employment and distribution of semantic formulas in connection with interlocutor status, it can be stated that interlocutor status had no effect on the use of semantic formulas that Vietnamese vocational students utilized to make refusals.

#### 4.4 Discussion

The findings of this study partly explore how Vietnamese vocational students produced the speech act of refusal in English. From the abovementioned results, it is obvious that indirect strategies are more preferred than direct strategies. To make refusals, they employed direct strategies (e.g., *'I can't'*) in a low frequency and gave excuses, reasons, and explanations as their main strategy to reject invitations, offers, suggestions, and requests from their interlocutors. In addition, they also suggested alternatives or made promises of future acceptance in lower frequencies to produce their responses to refusals. This finding is in line with previous studies of Al-Issa (2003), Wannaruk (2008), Nguyen (2017), and Khamkhien (2022), which reported that the majority of EFL learners tend to utilize reasons and explanations to make refusals rather than other types of semantic formulas. The explanation for this tendency is that they may seek the best way to mitigate the risk of threatening others' face as well as to make them appear more polite in social communication.

Considering refusals in four eliciting speech acts (Invitation, Offer, Suggestion, and Request), it is clear that indirect strategies were dominant in each situation (see Table 3, 4, 5, and 6). However, in their responses, Vietnamese vocational students did not use individual speech acts or strategies to make refusals. In fact, they employed different combinations of indirect strategies, adjuncts, and direct strategies to produce complete responses.

For example, to refuse a best friend's offer to give them some money, most of them use a combination of gratitude/appreciation (e.g., *'Thank you'*), negative willingness/ability (e.g., *'But I can't receive money from you'*), and a statement of alternative (e.g., *'I'll use my mother's old phone'*). When using such combinations to make refusals, they possibly tried to achieve effective communication and reduce the risk of face-threatening. This means that they showed a tendency to produce speech act sets that were formed from smaller units to serve only one communicative purpose (Válková, 2013). This finding is in accordance with the work of Khamkhien (2022), who reported that Thai university students normally use speech act sets in their refusals. Regarding the context of Vietnam, this finding is in line with results from previous studies of Doanh and Yen (2024), Ly and Lan (2024), and Tuyen (2024). Their findings suggest that Vietnamese learners of English frequently employ indirect methods, such as providing an excuse or a reason to soften their refusal, a strategy deeply rooted in their native culture's emphasis on "saving face."

Remarkably, the analysis from earlier sections of this study revealed that the interlocutor status had no effect on Vietnamese vocational students' refusals. In 11 situations (3 invitations, 2 offers, 3 suggestions, and 3 requests), they mostly employed indirect strategies and adjuncts to refusals. There was only one direct strategy (*negative willingness/ability*), which could be found in high frequency in situation 2, where they refused a best friend. This result is totally different from some previous studies that suggested that refusals made by EFL learners were affected by social status (Zhao & Nor, 2016; Nguyen, 2017; Khamkhien, 2022). The deep influence of Confucianism and Collectivist values can explain this finding. Specifically, the Vietnamese concept of face is defined as a socially approved image that must always

be attended to in interaction. Losing face can lead to significant social disapproval, shame, and damaged relationships. Hence, the importance of face-saving heavily influences communication styles in Vietnam, a highly collectivist society (Pham, 2014). This leads to the conclusion that the cultural backgrounds of Vietnamese vocational students impact their choices of refusal strategies.

## 5. CONCLUSION

Results from this study indicated that Vietnamese vocational students used more indirect strategies than direct strategies when they made refusals to invitations, offers, suggestions, and requests. *An excuse/reason/explanation* was the most frequently used semantic formula, followed by *gratitude/appreciation* and *a statement of alternative*. The high frequency of indirect strategies in combination with adjuncts to refusals demonstrated that Vietnamese vocational students were aware of how to mitigate the risk of face-threatening when making refusals. In addition, it was found that participants always deployed combinations of different semantic formulas to produce diversified speech act sets. Lastly, findings from this study revealed that interlocutor status (higher, equal, or lower) had no impact on the production of refusals.

There are some limitations that can be found in this study. Firstly, the number of participants is still limited. Secondly, factors that may affect the production of refusals, such as age, educational background, or gender, were not considered. Lastly, other in-depth data collection techniques, such as interviews, were not utilized to explore what could really affect the choices of refusal strategies. Hence, larger studies with different data collection methods are also required to obtain a more meaningful insight into the speech act of refusal in the context of Vietnam, where English is used as an EFL, not their mother tongue.

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**Appendix 1**

<b>DISCOURSE COMPLETION TASK</b>	
<b>Part I: Background Information</b>	
Name.....	Surname .....
Faculty .....	Major ..... Year of Study .....
<b>Gender</b>	
Male <input type="checkbox"/>	Female <input type="checkbox"/>
Age: .....	
<b>Part II: Discourse Completion Task</b>	
This part consists of 12 different situations. Please read the following scenarios and then respond in the blank after “You”. Please give your responses as you would in actual conversation. The data will be used for research purposes only.	
<b>Situation 1</b>	
One of your classmates invites you to go to the cinema this evening. However, you are not well, and you would like to stay at home. What would you say?	
You: .....	
<b>Situation 2</b>	
You have just lost your mobile phone. Nam, your best friend, offers to give you some money so that you can buy a new one. However, you do not want to receive money from anyone. What would you say to decline?	
You: .....	
<b>Situation 3</b>	
You are in a restaurant with some classmates, but you are not ready to order. A friend of yours suggests that you should try braised tuna. However, you do not like eating fish at all, and you want to eat pork. What would you say?	
You: .....	
<b>Situation 4</b>	
A friend who is the same age as you asks for borrowing you motorbike to ride to the market for some shopping. However, you do not trust in him, and thus, do not want to lend him your motorbike. What would you say?	
You: .....	
<b>Situation 5</b>	
You are in the parking lot of your college, and you find that your motorbike has a flat tire. Your history teacher offers to give you a ride. However, you are a bit afraid of him. What would you say to refuse?	
You: .....	
<b>Situation 6</b>	
One senior student that you have known for a year wants to borrow your Basic English coursebook. However, you need this book because you are preparing for your examination next week. What would you say?	

**You:** .....

**Situation 7**

You and some classmates just helped your form teacher to finish a small project. To celebrate successful completion of the project, he/she invites all of you to lunch. However, your mother is in the hospital, and you must look after her. What would you say?

**You:** .....

**Situation 8**

You are thinking of an idea for your startup competition next month. Your advisor suggests a topic in which you are not interested at all, and you would like to work on something else. What would you say?

**You:** .....

**Situation 9**

You stay in the same dormitory with Tú. She is a high school vocational student, and she is 4 years younger than you. She comes to you and asks for help with some English exercises. However, you are not free because you are doing a lot of homework. What would you say?

**You:** .....

**Situation 10**

A junior student who is younger than you invites you to her birthday party tomorrow evening. However, you are flat broke and do not have money to buy a gift for her. What would you say to refuse?

**You:** .....

**Situation 11**

Thu, your junior classmate, is telling you what she did last week. She came to a new Thai restaurant near your college and tried some food. She suggests you visit that restaurant and try some. However, you cannot eat spicy food. What would you say?

**You:** .....

**Situation 12**

You go to the college canteen to buy an ice-cream. When doing payment, you realize that you have forgotten to take your wallet. A junior student who you know well offers to pay for it. However, you would not like to accept his/her offer. What would you say?

**You:** .....

**Appendix 2**

Classification of Refusal Strategies (Beebe et al., 1990)
<p><b>I. Direct</b></p> <ol style="list-style-type: none"><li>1. Using performative verbs (<i>I refuse</i>)</li><li>2. Non-performative statements<ol style="list-style-type: none"><li>○ "No"</li><li>○ Negative willingness/ability (<i>I can't./I won't./I don't think so</i>)</li></ol></li></ol>

## II. Indirect

1. Statements of regret (*I'm sorry.../I feel terrible...*)
2. Wishes (*I wish I could help you...*)
3. Excuses, reasons, explanations (*My children will be home that night./I have a headache*)
4. Statements of alternative
  - I can do X instead of Y (*I'd rather.../I'd prefer...*)
  - Why don't you do X instead of Y? (*Why don't you ask someone else?*)
5. Setting a condition for future or past acceptance (*If you had asked me earlier, I would have...*)
6. Promises of future acceptance (*I'll do it next time./I promise I'll.../Next time I'll...*)
7. Statements of principle (*I never do business with friends.*)
8. Statements of philosophy (*One can't be too careful.*)
9. Attempt to dissuade an interlocutor.
  - Threat or statement of negative consequences to the requester (*I won't be any fun tonight to refuse an invitation*)
  - A guilt trip (when a waitress tells customers who want to sit for a while: *I can't make a living off people who just order coffee.*)
  - Criticize the request/requester (statement of negative feeling or opinion; insult/attack (*Who do you think you are?/That's a terrible idea!*))
  - Request for help, empathy, and assistance by dropping or holding the request.
  - Let the interlocutor off the hook (*Don't worry about it./That's okay. / You don't have to.*)
  - Self-defense (*I'm trying my best./I'm doing all I can do.*)
10. Acceptance that functions as a refusal
  - Unspecific or indefinite reply
  - Lack of enthusiasm
11. Avoidance
  - Nonverbal
    - Silence
    - Hesitation
    - Doing nothing
    - Physical departure
  - Verbal
    - Topic switch
    - Joke
    - Repetition of part of request (*Monday?*)
    - Postponement (*I'll think about it.*)
    - Hedge (*Gee, I don't know./I'm not sure.*)

### Adjuncts to Refusals

1. Statements of positive opinion/feeling or agreement (*That's a good idea.../I'd love to...*)
2. Statements of empathy (*I realize you are in a difficult situation.*)
3. Pause fillers (*uhh/well/oh/uhm*)
4. Gratitude/appreciation

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# PHÂN TÍCH HÀNH NGÔN TỪ CHỐI CỦA SINH VIÊN MỘT TRƯỜNG CAO ĐẲNG NGHỀ TẠI VIỆT NAM

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**Tóm tắt:** Từ chối là một trong những hành vi ngôn ngữ được thực hiện thường xuyên nhất trong cuộc sống hàng ngày của con người. Tuy nhiên, việc thực hiện hành ngôn từ chối bằng Tiếng Anh là một thách thức, đặc biệt đối với những người không nói tiếng Anh như tiếng mẹ đẻ, do khả năng làm mất thể diện của người khác và gây gián đoạn sự tương tác trong đối thoại. Nghiên cứu này tìm hiểu cách sinh viên Việt Nam đang học ở một trường cao đẳng nghề thực hiện hành ngôn từ chối đối với lời mời, lời đề nghị, gợi ý và yêu cầu. Đối tượng tham gia nghiên cứu này là 18 sinh viên cao đẳng nghề Việt Nam đang học tiếng Anh như ngôn ngữ thứ hai (L2). Các sinh viên này được yêu cầu hoàn thành Phiếu khảo sát diễn ngôn gồm 12 tình huống. Dữ liệu thu thập được phân tích bằng cách sử dụng bảng phân loại các chiến lược từ chối do Beebe và cộng sự (1990) đề xuất. Kết quả cho thấy các chiến lược gián tiếp được sinh viên cao đẳng nghề người Việt Nam ưa chuộng, vì có thể giảm thiểu nguy cơ làm người khác mất thể diện. Kết quả cũng cho thấy sinh viên cao đẳng nghề người Việt Nam có xu hướng sử dụng kết hợp chiến lược gián tiếp, các yếu tố hỗ trợ và chiến lược trực tiếp. Ngoài ra, có thể khẳng định rằng việc thực hiện hành ngôn từ chối của sinh viên cao đẳng nghề người Việt Nam không bị chi phối bởi vị thế của người đối thoại.

**Từ khóa:** hành ngôn, phân loại các chiến lược từ chối, sinh viên cao đẳng nghề, từ chối

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## Ghi chú

Các tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

# EXPLORING METAPHORICAL REPRESENTATIONS OF HOME AND SOCIAL RELATIONSHIPS IN ENGLISH AND VIETNAMESE: A CULTURAL PERSPECTIVE

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**Abstract:** *The current study explores the metaphorical conceptualization of home and social relationships in the English and Vietnamese languages building on the Conceptual Metaphor Theory (CMT) as a conceptual background. Using a mixed-methods approach, this research has a mixture of qualitative interpretation of metaphorical language of corpora and dictionaries, and quantitative data of a survey based on 70 research participants (both native and bilingual). The results indicate culturally specific metaphoric patterns: Vietnamese metaphors tend to be architecture and nature-based (e.g., A FAMILY IS A HOUSE), and hence reflect the values of collectivism that require set predetermined hierarchy, security, and interdependence; contrastingly, English metaphors are journey, and emotional-based (e.g., LOVE IS A JOURNEY), and thus lead to individualism and development. Such metaphors are not only shaping means of expression in linguistics, they indicate more to the sociocultural cognition. The research has a certain value to cross-cultural cognitive linguistics as it can contribute insight regarding the mediation of cultural conceptions of belonging, identity, and interpersonal relationships through metaphor.*

**Keywords:** *conceptual metaphor theory, cultural cognition, home, metaphor, social relationships*

## 1. INTRODUCTION

Metaphors are not merely superfluous ornaments but basic devices that human beings use to construct the abstract experiences in terms of concrete realities. As proposed by Lakoff and Johnson in *Metaphors We Live By* (1980), metaphor is inextricably present in our thinking, they determine not only language, but also perception and behavior. The areas of home and social relations are among the most metaphorically dense ones, as they are also fundamental to the personal identity, cultural values and emotional life.

The English and Vietnamese speaking communities are just one of the cultures that perceive the concept of home beyond the actual area, it encompasses the idea of emotional safety, social order, and family unity. On the same note, other social interactions including family, romantic

and community relations can also be metaphorically perceived and interpreted as a way of gauging how individuals define their social environments.

According to recent findings (Vu, 2020; Nguyen, 2023), metaphorical associates of home and relationships are culturally created and frequently rooted in everyday day-to-day life events. In the example of Vietnamese metaphors, a chapter titled A FAMILY IS A HOUSE is not only an illustration of architectural mappings, such as a father is a roof or a husband is the pillar, but it also interprets some strong cultural values of hierarchy, stability, and collective prosperity. When a literal translation of metaphors such as “broken home” or “lay the foundation of a relationship” is made in the English language, they tend to be less spatial in their elaboration and more concerned with emotional centrality and

development of a relationship.

In spite of the growing interest in the studies of metaphors and CMT, there remains a gap in cross-cultural comparative studies the metaphoric domain involving culture as a source of metaphorical home and social relationships within the English-Vietnamese cross-cultural perspective. Further, the majority of the existing literature (1) describe cases in one particular language; or (2) are of anecdotal, non-systematic description supported by no empirical analysis.

Thus, this study aims to provide a contribution to the literature by examining English and Vietnamese conceptualization of home and social relationships in metaphorical terms with the help of the mixed-methods approach. It relies on both qualitative linguistic research and quantitative survey of bilingual and native speakers in order to compare key tenets of metaphor and evaluate how they are shaped by cultural values, embodied experience, and worldview.

The key **research questions** guiding this investigation are:

1. What are the dominant conceptual metaphors used to represent home and social relationships in English and Vietnamese?
2. How do these metaphors reflect underlying cultural values and cognitive patterns?
3. What are the implications of metaphorical differences for cross-cultural understanding?

The tendency towards the answers to these questions will allow the study not only to enlighten the linguistic forms of metaphor, but also its cognitive and cultural meaning. Finally, it brings out the aspect of metaphor as a medium that links language, thinking, and culture- a window through which one can look and find out cultural similarities and differences in how people

conceptualize human relationships.

## 2. LITERATURE REVIEW

### 2.1 Theoretical Foundations: Conceptual Metaphor Theory

CMT was proposed by Lakoff and Johnson (1980). This theory posits that “metaphor is not merely a rhetorical device but a fundamental mechanism of thought” by which individuals imagine abstract realms on the basis of more tangible ones. This view of metaphor is based on the assumption that metaphor is “rooted in embodied experience” and relies on source domains such as space, movement, or physical structure in order to conceptualize more abstract concepts such as emotion, family, or social relationships (Lakoff & Johnson, 1980; Rohrer, 2007).

As Kövecses (2010) notes, metaphor helps us to understand things to which we have little or no access by way of re-mapping these onto things we can see or touch. These mappings are not universal, but are culturally and experientially determined.

The study of conceptual metaphor as evolved since the mainstream publications of Lakoff and Johnson (1980) signifying the core metaphoric nature of human thought and language. Follow up rescourses have shown that metaphor is not a stylistic flourish in language, but a structural cognitive process by which abstract concepts are comprehended (Lakoff, 1993; Gibbs, 1994). Leveraging on this, Kövecses (2010) gave an in-depth description of the systematicity and cross-cultural felicity of metaphors, whereas Cameron and Low (1999) explored different pedagogical and discourse aspects of metaphor studies. Yu (1998) demonstrated how metaphorical thinking is influenced by cultural models in Chinese and once again, managed to suggest that metaphor is universal and yet culturally contingent.

Such wider researches form the conceptual framework that the current

study is constructed on. Although most of the previous studies have covered a broad spectrum of domains, the scope of the present article limits itself to the particular areas of home and social relations. This narrowed down approach will be able to explore more into the details of how metaphorical representations in these two languages show reflection of cultural values.

## 2.2 Theoretical Framework

The theoretical framework guiding this research is CMT. It analyzes metaphor as a window into cultural cognition, and studies metaphorical patterns as both systematic and meaningful. Following Lakoff and Johnson (1980), metaphor is seen as “pervasive in everyday life, not just in language but in thought and action” (p. 3). In this sense, metaphor demonstrates the manner in which people organize their cognition of abstract areas such as “home” and “relationships” through culturally and physically based experience.

## 2.3 Conceptual Framework

The conceptual framework is grounded in the theoretical presumptions of CMT and is structured around two primary target domains. The first is “home”, which encompasses notions of space, identity, and security, while the second is “social relationships”, which include love, family ties, and community bonds. Together, these domains provide a culturally embedded foundation for examining how metaphor shapes and reflects cognitive and social understandings across linguistic contexts. These are explored through the source domains of architecture (roof, wall, pillar in Vietnamese), journey (path, destination in English), unity (one soul, glue), and nature (tree, roots).

This study consists of analyzing a number of idioms, proverbs and metaphorical expressions in both languages to show how each culture conceptualizes home, relationships differently, depending on their

values (e.g., collectivism vs. individualism).

## 2.4 Home and Family Metaphors in Vietnamese

The Vietnamese culture is especially salient in home and family metaphors. The metaphors that Vietnamese frequently rely on in organizing their perception of family and social relations are based on the tangible, daily life experience, particularly, on the notion of the house.

According to Vu (2020) “The conceptual metaphor A FAMILY IS A HOUSE is a typical conceptual metaphor of the family in Vietnamese (in comparison with other conceptual metaphors of the family in Vietnamese such as A FAMILY IS A BIRD’S NEST, A FAMILY IS A TREE, A FAMILY IS A COHESIVE UNIT). It reflects the distinctive cognition of Vietnamese people about the structure, durability and functions of the family” (p. 46).

Moreover, Vu (2020) says, “Seeing the family as a house, Vietnamese people usually use many linguistic forms belonging to the semantic field of houses such as house, roof, foundation, rooftop, pillar, wall, design, construction, leaking, cracks, damage, collapse, etc. to talk about the family” (p. 47). The semantic abundance of terms designating the house is projected onto the family relationships and roles, e.g., the father is the roof, the husband is the pillar, or the family is the basis of life.

In terms of mapping, as Vu (2020) states “In the conceptual metaphor A FAMILY IS A HOUSE, the source domain HOUSE provides knowledge of a house’s features such as: having a design; being constructed carefully; having different parts such as ridge, roof, wall, ground, foundation, door, window, stairs, doorstep, paint, lime; having space: inside the house, outside the house, upstairs, downstairs; having different styles: high houses, low houses, 1-storey houses, multi-story houses, Thai-roof houses, etc” (p. 46).

Through these mappings, it is possible to know not only how the Vietnamese people view the structure and organisation of the family but also how they accord stability, safety, and social roles to the members of the family. Such as, the common idiom “Không cha nhà dột, cột xiêu” (Without father, the house roof is leaking, the pillar is sloping) demonstrates the process of mapping cultural beliefs concerning roles of family members onto the spatial and architectural aspects.

## 2.5 Idioms and Cultural Values in Social Relationships

Nguyen (2023) emphasizes the value of metaphor in understanding Vietnamese views on love and loyalty, stating that “Idioms are regarded as a form of a language that reflects cultural and national mentalities. For this reason, studying idioms about love is one of the best ways to uncover Vietnamese people’s ideas about love (p. 856).

Among the significant metaphors is the metaphor of LOVE IS UNITY in which Nguyen (2023) indicates that “Unity in love represents one of the extremely important conditions that lead to sustainable love” (p. 859). Such a metaphor indicates collectivism and the principle of pleasant coexistence. As an example, the idioms used that refer to faithfulness and strong emotional tie include: “một lòng một dạ” (one mind one soul), “có thủy có chung” (be faithful in love), “tình sâu nghĩa nặng” (deep love intense gratitude), and “nát đá vàng phai” (broken stone and faded gold) .

As Nguyen (2023) concludes, “The value of faithfulness is the greatest measure of true love. There are several idioms in Vietnamese ... which recognise the conclusive role of faithfulness in love” (p. 858). This observation highlights how Vietnamese culture conceptualizes love as inseparable from loyalty and moral duty. Such a view resonates with the collectivist

orientation of Vietnamese society, where personal relationships are deeply tied to social and ethical responsibilities.

## 2.6 English Metaphors of Home and Relationships

In English, Home and relationship metaphors are also fairly common but tend to vary in their type and richness when compared to the Vietnamese language. Such examples as “broken home, the heart of the home, or “building a relationship” are widespread, although they tend not to project family roles onto physical structures in such detail. Rather they stress functionality, emotional centrality or relationship development.

The English language also has some metaphors of journey and construction to speak about relations processes, such as “crossroads in a relationship”, “putting down roots, or laying the foundation of a partnership”. These imply that relationships are processes or journeys, which conforms to more individualistic and developmental perspective of personal relationships.

## 2.7 Cross-Cultural Comparison and Gaps

The available literature demonstrates that the Vietnamese and English languages have experience-based and culture-based systems of metaphors. Nevertheless, “many studies address metaphor in one language”, and “few offer a systematic cross-cultural analysis focusing specifically on ‘home’ and ‘social relationship’ metaphors in both English and Vietnamese”.

Furthermore, as mentioned in the outline, “there is insufficient attention to differences by age, region, or social class in metaphor use”, and “English data are often underrepresented or fail to contextualize within British/American/Australian cultures.” The present research attempts to fill these gaps with the help of comparative, empirical, and culturally contextualized analysis.

The combination of native speaker data and linguistic analysis used in the current study aims not only to provide contrastive metaphorical systems, but moreover to display linguistic embodiment of cultural cognition across two typologically and culturally remote languages. Whereas the majority of the available research is based on textual analysis alone, the incorporation of empirical data of perception in the present study provides a more detailed and realistic picture of metaphorical cognition. Such a setup presents the study as a valuable addition to the field of metaphor research and cross-cultural cognitive linguistics.

## 2.8 Related Studies in Cross-Cultural Metaphor Research

A number of comparative studies have pointed to the importance of metaphor in communicating culturally entrenched mode of thinking. Kövecses (2015) explored the cross-cultural variations in metaphorical emotion patterns in that the English and Hungarian emotion patterns of anger, for example, are of different emotional expectations. On the same token, Yu (1998) has studied metaphorical phenomena in the Chinese and English languages and came to the conclusion that metaphor is a window to understanding the interpretation of human experience developed by culture. Recently, Vu (2020) and Nguyen (2023) extolled the substantial correlation between metaphor and collective values in the Vietnamese context. These remarks also confirm that metaphor is not only a decoration but also a focus of cultural cognition. A systematic analysis of Vietnamese and English metaphors in spheres of home and social relationships has, however, not been studied yet properly, and that is why it is justified to conduct a research on this topic.

Along with the work basic contributions of Kövecses (2015) and Yu (1998), recent advances in metaphor research also indicate how language, culture, and

cognition are normally involved with one another dynamically. As a case in point, Charteris-Black (2004) points out about the rhetorical and the ideological functions of metaphor in a civic discourse with regard to indicating that there is a strategic use in employing metaphors to seal the missions of culture with discourse. Deignan (2005) combines corpus linguistics and metaphor theory explicitly to investigate patterns of metaphor usage in everyday discourse, and highlights the value of real-data in the study of metaphor.

In Southeast Asia, Nguyen (2012) started the contrastive study on a metaphor of power and compared Vietnamese and English political speeches and showed the influence of cultural values such as harmony, hierarchy, and directness on metaphors. Similarly, Le and Nguyen (2021) explored the use of metaphoric expressions in Vietnamese proverbs and idioms, and her investigation revealed that all of them majorly have their foundations in everyday life, nature, and family experience, which are rather close to collectivistic cultures.

All these researches confirm the thesis that metaphor is not only a linguistic phenomenon but also a manifestation of the socio-cultural cognition. Still, there are not many studies which systematically compare the metaphorical system of home and social relation in terms of typologically and culturally diverse languages such as English and Vietnamese. This study would seek to fill that gap by means of conceptual and empirical investigation.

Next, Charteris-Black (2004) focuses on the role of metaphor as an ideology in forming the discourse that is used in the public and political arena claiming that metaphors are usually used in a strategic way being done to persuade and to influence people. This coincides with the thoughts that metaphor is closely connected with cultural power schemes and communicative meanings. The

emphasis on empirical data that proves to be very important in the metaphor study is also evidenced by Deignan (2005), who bases his methodological principles on corpus linguistics, having identified the regular patterns of metaphoric phenomenon, as it occurs in actual use of language. These contributions justify methodological and conceptual decisions of the current study.

### 3. RESEARCH METHODOLOGY

#### 3.1 Research Design

To thoroughly examine metaphorical conceptualizations of “home” and “social relationships” across English and Vietnamese, this study adopted a mixed-methods design. Given the multifaceted nature of metaphor-as a linguistic, cognitive, and cultural construct-both qualitative and quantitative approaches were necessary.

The research design consisted of a qualitative conceptual analysis of metaphorical expressions using the framework of CMT (Lakoff & Johnson, 1980), alongside a quantitative survey that assessed participants’ familiarity with, emotional associations to, and cultural interpretations of selected metaphors. This dual approach enabled both in-depth theoretical insights and empirical verification, thereby bridging theory-driven metaphor studies with data-grounded cultural understanding.

In particular, the qualitative component was conducted through content analysis of collected metaphorical expressions in order to uncover the cultural values embedded in language. This strategy allowed the study to move beyond numerical tendencies and to explore in depth the meanings and cultural implications of specific expressions.

#### 3.2 Participants

The research enrolled 70 participants who were grouped into three. Group A is comprised of 30 native Vietnamese speakers aged between 18 and 35, their assumption is

that a balance in representations of people in rural and urban regions is taken into consideration. Group B consisted of 30 native speakers of English (United States, the United Kingdom, and Australia) of age 18-40. Group C consisted of 10 Vietnamese-English bilinguals aged 20-35, whose responses lent a bilingual outlook and acted as the model on which cross-lingual interpretations were to be validated.

The respondents were picked through purposeful sampling and notified through educational communities and academic networks via the internet. Valuable ethical principles were employed: the informed consent was given, the research was anonymous and voluntary, and the information was processed with confidentiality.

#### 3.3 Data Collection Instruments

There were two main tools used:

##### 3.3.1 *Corpus Compilation of Metaphors*

To establish a robust dataset for analysis, a total of 100 metaphorical expressions (50 in Vietnamese and 50 in English) were collected from idiom and proverb dictionaries, corpus-based sources such as COCA and the VTen Idioms Bank, as well as films, literature, and native speaker conversations.

These expressions were carefully filtered based on their relevance to home and social relationships, frequency of use, and cultural salience. The resulting set of metaphors formed the foundation for the metaphor mapping process and directly informed the design of the questionnaire items.

##### 3.3.2 *Questionnaire Design and Administration*

The structured questionnaire comprised 28 Likert-scale items, which were organized under four key constructs: familiarity with metaphors, emotional association, cultural embedding, and interpretive flexibility.

Each construct contained seven items

measured on a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree). Additional sections collected demographic information and offered open-ended prompts on metaphor interpretation. A pilot test was conducted with 6 bilingual participants to ensure clarity and cultural appropriateness.

### 3.4 Data Analysis Procedures

Quantitative data were analyzed using SPSS (Version 26). The analysis comprised descriptive statistics to determine the mean and standard deviation of each construct, independent-samples t-tests to assess differences in metaphorical familiarity and perception between native Vietnamese and native English speakers, and Pearson correlation tests to explore the interrelationships among the four constructs. This integrated analytical approach provided a comprehensive understanding of both the structural patterns underlying metaphor use and the subjective experiences that inform them across cultural contexts.

The methodology provides depth by means of analytical conceptual metaphor in combination with the empirical data compiled by the participants, as well as breadth, due to the opportunity to observe, explain, and compare patterns through linguistic and cultural systems.

Besides, the triangulation of data of the corpus, survey, and open-ended responses contributes to validity, credibility, and

cultural contextualization of the findings, which makes the research not only methodologically effective but also theoretically informed.

Alongside descriptive statistics, qualitative interpretation was carried out to highlight the cultural significance of selected metaphorical expressions. Each idiom or proverb was examined in its linguistic and cultural context, and its metaphorical mapping was interpreted with reference to cultural models such as collectivism, hierarchy, and individualism. For example, idioms referring to the “house” in Vietnamese were analyzed not only as architectural images but also as reflections of family structure and social reputation. This combined approach allowed both quantitative trends and qualitative insights to complement each other.

## 4. RESULTS AND DISCUSSION

### 4.1 Descriptive Statistics

The descriptive statistics were calculated in order to determine how the participants responded to the four constructs namely Familiarity with Metaphors, Emotional Association, Cultural Embedding, and Interpretive Flexibility. As Table 1 demonstrates, mean scores of all constructs were concentrated at the middle of the 5-point Likert, which exemplifies a rather neutral attitude to metaphorical language to somewhat positive attitude.

**Table 1. Descriptive Statistics for Four Constructs (N = 70)**

<i>Descriptive Statistics</i>					
	N	Minimum	Maximum	Mean	Std. Deviation
Familiarity with Metaphors (Fam_Mean)	70	1.86	4.00	2.9857	.45251

Emotional Association (Emo_Mean)	70	1.57	4.29	3.0143	.56369
Cultural Embedding (Cult_Mean)	70	1.86	4.57	3.0041	.57090
Interpretive Flexibility (Flex_Mean)	70	2.00	3.86	2.9245	.49590
Valid N (listwise)	70				

The highest mean was recorded in the Emotional Association dimension (M = 3.01, SD = 0.56), suggesting that participants tended to feel emotionally engaged with metaphorical language. The lowest mean was observed in Interpretive Flexibility (M = 2.92, SD = 0.50), which may reflect challenges in interpreting metaphors in varied or unfamiliar cultural contexts. The

relatively narrow standard deviations across constructs indicate moderate consistency in participant responses.

These descriptive patterns demonstrate an initial overview of how the respondents, overall, associate with metaphorical expression when it comes to the levels of recognition, emotional intensity, cultural signification and interpretive openness.



**Figure 1. Mean Scores of Constructs with Standard Deviation**

Mean scores and standard deviations for the four metaphor-related constructs. Emotional Association shows the highest mean, while Interpretive Flexibility is the lowest.

#### 4.2 Correlation Analysis

A Pearson correlation analysis was conducted to examine the interrelationships among the four measured constructs: Familiarity with Metaphors, Emotional Association, Cultural Embedding, and Interpretive Flexibility. The results are displayed in Table 2.

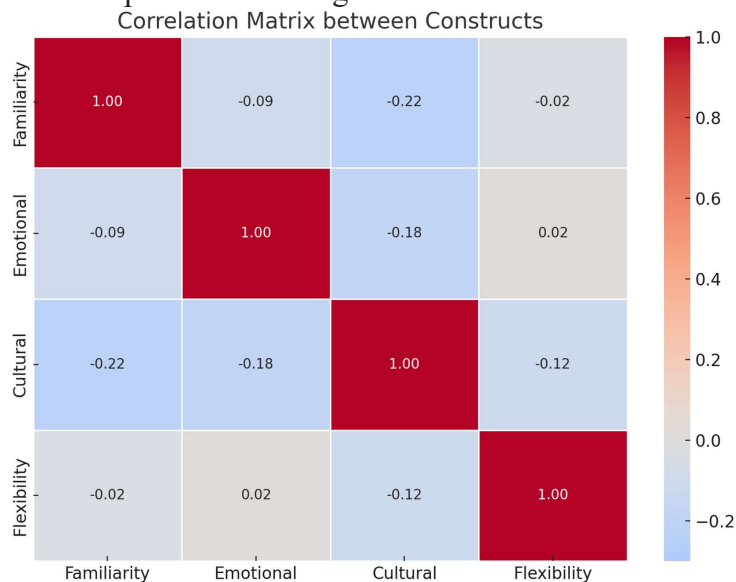
**Table 2. Pearson Correlations between Constructs (N = 70)**

<i>Correlations</i>					
		Fam_Mean	Emo_Mean	Cult_Mean	Flex_Mean
Fam_Mean	Pearson Correlation	1	-.094	-.220	-.023
	Sig. (2-tailed)		.438	.068	.848
	N	70	70	70	70
Emo_Mean	Pearson Correlation	-.094	1	-.183	.017
	Sig. (2-tailed)	.438		.129	.891
	N	70	70	70	70
Cult_Mean	Pearson Correlation	-.220	-.183	1	-.121
	Sig. (2-tailed)	.068	.129		.318
	N	70	70	70	70
Flex_Mean	Pearson Correlation	-.023	.017	-.121	1
	Sig. (2-tailed)	.848	.891	.318	
	N	70	70	70	70

None of the correlations reached statistical significance at the  $p < .05$  level. The correlation coefficients were all low ( $|r| < .30$ ), and some were near zero (e.g.,  $r = -.023$  between Fam\_Mean and Flex\_Mean), indicating a lack of linear association between the constructs.

These results indicate that the four dimensions measured are autonomous and different aspects of metaphorical thinking.

As an example, a familiarity of a subject with metaphors is not always an indicator of his emotional reaction towards them, and flexibility of interpreting them in different cultural settings. This once again leads to the opinion that the processing of metaphor is multi-dimensional phenomenon, in accordance with the premises of Conceptual Metaphor Theory (Lakoff & Johnson, 1980).



**Figure 2. Correlation Matrix of Constructs**

This heatmap shows the Pearson correlation coefficients between the four constructs, highlighting their relative independence and multidimensional nature in metaphor processing.

### 4.3 Independent-Samples T-test Analysis

To investigate potential linguistic-cultural differences in metaphorical

perception, Independent-Samples T-tests were conducted comparing native Vietnamese speakers (Group 1,  $n = 24$ ) and native English speakers (Group 2,  $n = 21$ ) across four constructs.

The results are summarized in Table 3 below:

**Table 3. Independent-Samples T-test Results by Native Language**

Group Statistics					
	NativeLang	N	Mean	Std. Deviation	Std. Error Mean
Fam_Mean	1	24	3.0774	.50372	.10282
	2	21	2.8844	.43241	.09436

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Fam_Mean	Equal variances assumed	.782	.382	1.369	43	.178	.19303	.14101	-.09134	.47739	
	Equal variances not assumed			1.383	42.989	.174	.19303	.13956	-.08842	.47447	

Group Statistics					
	NativeLang	N	Mean	Std. Deviation	Std. Error Mean
Emo_Mean	1	24	3.0476	.58927	.12028
	2	21	2.9388	.57245	.12492

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Emo_Mean	Equal variances assumed	.031	.862	.626	43	.534	.10884	.17376	-.24157	.45926	
	Equal variances not assumed			.628	42.506	.534	.10884	.17341	-.24100	.45869	

Group Statistics					
	NativeLang	N	Mean	Std. Deviation	Std. Error Mean
Cult_Mean	1	24	2.8571	.48946	.09991
	2	21	3.2177	.57253	.12494

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Cult_Mean	Equal variances assumed	.612	.438	-2.278	43	.028	-.36054	.16829	-.67976	-.04133	
	Equal variances not assumed			-2.254	39.657	.030	-.36054	.16997	-.68395	-.03714	

Group Statistics					
	NativeLang	N	Mean	Std. Deviation	Std. Error Mean
Flex_Mean	1	24	2.9286	.53286	.10877
	2	21	2.9048	.50776	.11080

Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Flex_Mean	Equal variances assumed	.044	.835	.153	43	.879	.02381	.15578	-.29035	.33797	
	Equal variances not assumed			.153	42.666	.879	.02381	.15527	-.28939	.33701	

Among the four constructs, only Cultural Embedding showed a statistically significant difference ( $t(43) = -2.28, p = .028$ ), with English speakers scoring higher ( $M = 3.22$ ) than Vietnamese speakers ( $M = 2.86$ ). This suggests that native English speakers may be more attuned to culturally embedded metaphors in their language.

All the rest of constructs, such as Familiarity, Emotional Association, Interpretive Flexibility, failed to exhibit strongly varying closeness between the groups ( $p > .05$ ), therefore, indicating similar tendencies of metaphor perception among the two linguistic groups in every other dimension.

#### 4.4 Interpretation and Comparison of Metaphors

The Vietnamese metaphors depict a hierarchically and collectivistic world. Architectural metaphors stress upon the existence of the family as a strong, well-organized and permanent. The father image is developed as a structural feature which means accountability and backing up. Nature metaphors, including family tree or warm nest, are ways of expressing the aspects of embodiment and support.

On the contrary, in English it is common to have metaphors that stress movement, direction and uniqueness. The image of the journey in the metaphor LOVE IS A JOURNEY is quite prominent and implies such an evolution in personal feelings and development. The English also think of relationships in terms of a journey as opposed to a structure. The emphases on change and self-determination are provided by the pre-existing metaphor as “we have grown out of touch” or “we have come to an end.”

To show an example, the Vietnamese saying “nhà cao cửa rộng” (a tall house with wide doors) does not simply speak about a physical house, but also means wealth and high social status, thus the cultural

importance of family reputation and stature is stressed. Similarly, the idiom “ấm cúng như cái tổ” (as cozy as a nest) also emphasizes how the home suggests comfort, warmth, safety, and group solidarity as a standard collectivist character in Vietnamese society.

English also has a strong tendency to express personal agency and personal autonomy metaphorically. The idiom “*a man's home is his castle*” illustrates the cultural emphasis on personal autonomy and privacy, while the metaphor “*to move on from a relationship*” underscores change and self-determination. These qualitative examples explain how the way metaphorical representations of the two languages are different not only in their image but also in the privileged cultural values.

Still another form of metaphor translation is the famous metaphor “*duyên nợ*” (predestined bond) in Vietnamese that readers can easily identify a romantic relationship as such that is not entirely at the discretion of individuals. The use of phrases like “*tơ hồng*” (the red thread) continue to enforce this type of cultural model, where love and marriage are simply destined and involve a sort of harmony and obligations that go beyond personal choices. All these metaphors denote the collectivist and spiritual nature of Vietnamese culture where relationships are considered interlaced with the family norms and the tradition.

#### 4.5 Link to Theory and Cultural Values

Such results lead to some results supporting the principles of the Conceptual Metaphor Theory (Lakoff & Johnson, 1980) which states that metaphors are created based on lived bodily experiences and are influenced by sociocultural context. The Vietnamese metaphorical thinking is oriented toward spatial and concrete that is visual and to a certain degree also tactile metaphors, well in line with collectivist tendencies (filial piety, interdependence,

harmony in society). Conversely, English metaphors are more inclined to feelings and mind as opposed to values of individualism and selfhood, which are characteristic of the West.

The metaphor A FAMILY IS A HOUSE is not only the linguistic expression but it is the fundamental ideological concept of social roles, duty, and security. On the contrary, relationship metaphors such as

LOVE IS A JOURNEY are metaphors of autonomy, which describe the relationships as an upstream option that is continually being determined by the individual paths.

#### 4.6 Overview of Differences and Commonalities

Even though both English and Vietnamese people metaphorically conceptualize the idea of home and relations, the cultural representation is different:

**Table 4. Cross-Cultural Conceptualizations of Home and Social Relationships**

Aspect	Vietnamese	English
Dominant metaphor	A FAMILY IS A HOUSE	LOVE IS A JOURNEY
Emphasis	Stability, structure, social role	Emotional change, autonomy
Cultural logic	Collectivism, hierarchy	Individualism, self-direction
Concrete imagery	High (architecture, nature)	Moderate (movement, emotion)

These contrasts affirm that metaphor is not fixed but context-dependent that the culturally distinctive mode in which people see, appraise and structure their emotive and relational worlds.

When viewed in this light metaphor is more than a convenient linguistic tool, it is a cultural compass, that carefully navigates people on the way they think about belonging, intimacy and identity. This division of discrepancy between Vietnamese and English metaphorical system throws light on the unspoken, but influential involvement of metaphor in determining not only manner of our utterance, but our thoughts, emotions and actions in the universe.

Altogether, this research exposes the role of metaphor, not only as a linguistic construct but as a culturally rooted psychological process. The fact that analysis of metaphors is complemented by quantitative survey as it illustrates the significance of cultural cognition within the language and thus metaphor is an important

mode of interface into cross-cultural conceptualization models.

#### 4.7 Pedagogical and Social Implications

The implications of this study are pedagogical mainly on the intercultural communication and language teaching. One of the possible solutions might be to include metaphor awareness in teaching practices as an approach that would foster the pragmatic competence of the learners and their cultural literacy. Moreover, social comprehension of metaphors is possible to resolve stereotypes and miscommunication as they are caused by literal or culture-bound meanings. In a case such as the metaphor of “trụ cột gia đình” in the Vietnamese culture, responsibility and authority of this type has a lot of depth to it, and this significance may not necessarily correlate to the perception of similar instances within the Western learners. These insights have the potential of enhancing the cross-cultural understanding by making education more culturally responsive.

## 4.8 Sociolinguistic and Cognitive Interpretations

In addition to the cultural connotation, metaphorical manifestation of home and social relationships is also important as a source of insight on embodied cognition and sociolinguistic identity. Rohrer (2007) indicates that metaphors are rooted to spatial and bodily experience and so it is a forceful emotional and relational meaning encoding device. Spatial metaphors used in Vietnamese context, like gốc rễ (first roots) and mái ấm (warm roof), are metaphors not merely linguistic tools but also acknowledged profound beliefs on belonging, multi-generational relations and emotional safety.

Sociolinguistically, use of metaphor may also serve an identifying, social slotting and affiliation purpose. Bilingual speakers especially have a tendency of moving between metaphorical structures of two cultures, and picking and choosing phrases that are familiar and meaningful to others. As such, one may use the Vietnamese-English bi-lingual; one may use the term: “broken home” in English settings and the term: “trụ cột gia đình” in Vietnamese settings, depending on which cultural norms they are utilizing. This is what such choices note about metaphor as a location of cognitive mobility and cultural negotiation.

This sociocognitive perspective makes strong the case that metaphors are not only stylistic traits but play a pivoting role in how persons think, feel, and interact with others in their cultural worlds.

## 5. CONCLUSION

### 5.1 Summary of Findings

This research has discussed the metaphorical conceptualizations of home and social relationships in English and Vietnamese based not only on linguistic analysis but also on data gathering processes. Using CMT frame, the study revealed how

metaphorical expressions can act not only as a means of language but also as ways of cognitive and cultural representations.

The results denoted a number of different types of metaphors in the two languages. The Vietnamese culture uses architectural and natural images most of the time in their metaphor to think about family and relationships, and this reflects their values of stability, hierarchical system and collectivism. English-speaking people, on the contrary, apply journey- and emotion-accounting metaphors that presuppose autonomy, emotional developments, and individualism. Although both linguistic systems rely on metaphor to impose an experience of love, belonging, and kinship, the cultural logic of such manifestations varies extensively.

The ability to integrate quantitative findings with qualitative insights created an efficient level of understanding and revealed the emotional connection and interpretation of these metaphors of a participant. Such metaphors as “Không cha nhà dột, cột xiêu” and “broken home” were explained as touching the common emotional and social premises with the respective culture groups.

Such a contrastive view of metaphor emphasizes the idea of metaphor as a bridge of cognition reflective of and reinforced by more culturally precise and specific modes of thinking about social life. It also highlights the usefulness of metaphor research in interpreting not only linguistic applications but also the social or cultural structures and cognition.

Regarding these findings, further research can focus on extending the study to another cultural and linguistic phenomenon, examining age- or region-specific observations, or using metaphor analysis in the case of immediate discourse. This paper will be a further addition to a growing literature of cross-cultural cognitive linguistics through providing

a more detailed insight into the way in which metaphor itself is constructed and constructed by the cultural worlds we all live in.

## 5.2 Implications

The results of this research have a number of implications to theoretical as well as practical fields. On the one hand, the analysis supports the significance of CMT as a cross cultural analytical tool. It proves that metaphor is not only a cognitive but also a cultural instrument by the means of which people perceive such abstract realms like home and relations with people. Secondly, according to the research, metaphor awareness is what should be introduced into the curriculum of language studies, especially in bi-cultural or cross-cultural environments. Knowledge of metaphorical patterns would improve the pragmatic competences of learners and their levels of intercultural sensitivity. Lastly, the research drives cultural linguistic by providing empirical information on the assertion that cultural embeddedness and context-sensitivity characterise metaphorical thinking.

Recent studies have emphasized the importance of teaching metaphor explicitly in EFL/ESL contexts to enhance learners' conceptual and communicative skills (Littlemore & Low, 2022).

Intercultural competence is more than the knowledge of the language, and it involves sensitivity to the culturally based concepts like metaphorical thinking, as Dervin and Gross (2021) contend. The development of critical cultural literacy in language learning can be thus achieved by raising awareness among the learners of metaphorical differences across cultures.

## 5.3 Limitations

Although this is a methodologically sound study, the study has a number of limitations. The sample size, despite being adequate in exploratory purposes, may not fully represent the broader English and Vietnamese-speaking populations. In addition, these metaphorical expressions used in the analysis were mostly selected based on dictionaries, body of texts and responses of the participants which can be assumed to avoid informal or emerging metaphors that may be in use in digital or youth language. Also, although the study was aimed at capturing the home and relationship metaphors used, it lacked the variables of gender, age or socio-economic background, which can determine how the metaphors are used and, therefore, interpreted.

## 5.4 Suggestions for Future Research

This paper can be extended in a number of ways in the future. Further investigation of demographic variables and their impact on metaphorical cognition might benefit from a bigger variety and number of the participants involved. One additional approach that researchers can take is to look at metaphorical language during occurrence of discourse in real-life, including social media conversations, interviews, or conversation in classrooms to capture the context-relational use of metaphors. Besides, the extension of the use of these analytical concepts to the other areas of culture, like education, health, or politics could enhance the realm and the sphere of the cross-cultural metaphor research. Lastly, involving experimental or neurological means can assist in proving and enhancing some theoretical statements regarding embodiment and mental performance of metaphor in different languages.

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## APPENDIX A. FULL SURVEY QUESTIONNAIRE

### Survey Questionnaire

#### *Section 1: Demographic Information*

1. What is your native language?

- Vietnamese
- English
- Other: \_\_\_\_\_

2. What is your age group?

- Under 18
- 18–25
- 26–35
- Over 35

3. What is your current residence?

- Urban
- Rural
- Suburban

4. If not a native English speaker, what is your level of English proficiency?

- Basic
- Intermediate
- Advanced
- Near-native

#### *Section 2: Familiarity with Metaphorical Expressions*

Please rate your familiarity with the following metaphorical expressions.

Likert Scale: 1 = Not familiar at all | 2 = Slightly familiar | 3 = Neutral | 4 = Familiar | 5 = Very familiar

No.	Metaphorical Expression	Familiarity (1–5)
1	“Không cha nhà dột, cột xiêu”	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
2	“Trụ cột gia đình”	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
3	“Một lòng một dạ”	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
4	“Broken home”	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
5	“We’re at a crossroads”	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5

### ***Section 3: Interpretation & Cultural Values***

6. How would you explain the meaning of the metaphor “A FAMILY IS A HOUSE”?

---

7. What does the metaphor “LOVE IS A JOURNEY” suggest to you?

---

8. How strongly do you associate the following values with family/love metaphors in your culture?

Likert Scale: 1 = Not at all | 2 = Slightly | 3 = Neutral | 4 = Strongly | 5 = Very strongly

Value	Rating (1–5)
Stability and order	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Emotional growth	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Family hierarchy	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Loyalty and unity	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Individual autonomy	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5

### ***Section 4: Reflective Responses***

9. In your native language, can you share a metaphor or idiom related to home or family?

---

10. Do you think metaphors about family and love reflect your cultural values? Why or why not?

---

### ***Section 5: Likert-Scale Items***

Please indicate your level of agreement with the following statements.

Likert Scale: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

#### **Construct 1: Familiarity with Metaphors**

Statement	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
I am familiar with idiomatic expressions related to family.					
I often use metaphors when talking about relationships.					
I recognize common metaphorical phrases in my native language.					
I have heard expressions like “trụ cột gia đình” or “broken home.”					
I can understand metaphorical meanings without needing explanation.					
I have learned metaphors from media, books, or conversations.					
I can easily identify metaphorical language in daily life.					

**Construct 2: Emotional Association**

Statement	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Metaphors about home evoke strong emotions for me.					
I feel emotionally connected to metaphors about love and family.					
Certain metaphors remind me of my personal experiences.					
I associate metaphorical expressions with feelings of safety or belonging.					
Metaphors help me express emotions that are hard to describe literally.					
When I hear a metaphor, I relate it to my own emotions.					
Emotional metaphors feel more powerful than literal statements.					

**Construct 3: Cultural Embedding**

Statement	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
Metaphors about home reflect cultural values in my society.					
I can see how idioms show respect for family in my culture.					
The way people use metaphors shows what they believe in.					
Cultural traditions influence how metaphors are formed.					
I notice different metaphorical expressions between cultures.					
I believe metaphors reveal deep-rooted cultural mindsets.					
My native metaphors express ideas tied to my heritage.					

**Construct 4: Interpretive Flexibility**

Statement	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
The meaning of a metaphor can vary depending on the person.					
I can think of multiple meanings for the same metaphor.					
I enjoy interpreting metaphors in different contexts.					
The same metaphor may have different meanings across cultures.					
Some metaphors are open to various emotional interpretations.					
I believe metaphor meaning depends on the listener's background.					
Metaphors are flexible and not fixed in meaning.					

# KHÁM PHÁ CÁC BIỂU TRƯNG ẢN DỤ VỀ NHÀ VÀ CÁC MỐI QUAN HỆ XÃ HỘI TRONG TIẾNG ANH VÀ TIẾNG VIỆT: MỘT GÓC NHÌN VĂN HÓA

**Trương Thanh Hằng**

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**Tóm tắt:** Nghiên cứu này khám phá cách thức khái niệm hóa ản dụ về “nhà” và các mối quan hệ xã hội trong tiếng Anh và tiếng Việt, dựa trên nền tảng lý thuyết ản dụ khái niệm (Conceptual Metaphor Theory – CMT). Sử dụng phương pháp hỗn hợp (mixed-methods), nghiên cứu kết hợp giữa phân tích định tính các ản dụ trong ngôn ngữ từ các kho ngữ liệu và từ điển, cùng với dữ liệu định lượng thu thập từ bảng khảo sát 70 người tham gia nghiên cứu (bao gồm người bản ngữ và người song ngữ). Kết quả chỉ ra các khuynh hướng ản dụ mang tính văn hóa đặc thù: ản dụ trong tiếng Việt có xu hướng dựa trên hình ảnh kiến trúc và thiên nhiên (ví dụ: GIA ĐÌNH LÀ NGÔI NHÀ), phản ánh các giá trị tập thể như trật tự tôn ti, an toàn và sự phụ thuộc lẫn nhau; ngược lại, các ản dụ trong tiếng Anh chủ yếu mang tính hành trình hoặc cảm xúc (ví dụ: TÌNH YÊU LÀ MỘT HÀNH TRÌNH), hướng đến chủ nghĩa cá nhân và sự phát triển bản thân. Các ản dụ này không chỉ là phương tiện biểu đạt trong ngôn ngữ học, mà còn phản ánh nhận thức xã hội – văn hóa sâu sắc. Nghiên cứu mang lại giá trị cho lĩnh vực ngôn ngữ học tri nhận liên văn hóa, khi cung cấp cái nhìn sâu hơn về cách văn hóa trung gian định hình nhận thức về sự gắn bó, bản sắc, và các mối quan hệ giữa con người thông qua ản dụ.

**Từ khóa:** ản dụ, các mối quan hệ xã hội, lý thuyết ản dụ khái niệm, nhà, nhận thức văn hóa

## **Thông tin tác giả:**

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## **Ghi chú**

Tác giả xác nhận không có tranh chấp về lợi ích đối với bài báo này.

# IDIOMS RELATED TO ANIMALS IN ENGLISH AND VIETNAMESE: A CULTURAL AND SEMANTIC CONTRAST

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**Abstract:** *By examining animal-related idioms in both English and Vietnamese, this study highlights the cultural and linguistic differences between the two languages. The research emphasizes how animals are viewed and symbolized differently when Western and Vietnamese cultures employ similar idiomatic expressions. In this study, idioms are analyzed by comparing their literal, metaphorical, and cultural meanings. The findings show that while some idioms share similar animal imagery, their meanings often diverge due to differences in traditions, beliefs, and cultural contexts. This demonstrates that idioms provide valuable insights into how each language reflects the worldview of its speakers. To enhance reliability, the dataset was expanded to 300 idioms (150 English and 150 Vietnamese) and analyzed using both qualitative and quantitative approaches.*

**Keywords:** *animals, contrastive analysis, English and Vietnamese, idioms*

## 1. INTRODUCTION

Language functions not only as a tool of communication but also as a reflection of cultural values and worldviews. One of the clearest ways in which culture is embedded in language is through idiomatic expressions. Animal-related idioms, in particular, allow speakers to convey ideas, emotions, and beliefs in vivid and imaginative ways. These idioms often carry strong symbolic meanings and detailed imagery, providing insight into how different cultures perceive and relate to animals (Fernando, 1996; Kövecses, 2010).

With globalization, effective cross-cultural communication has become increasingly important, making the mastery of idiomatic language a key component of language competence. In Vietnam, English is promoted as an essential foreign language under national education policies such as the Foreign Language Project 2020, which emphasizes communicative competence and intercultural awareness. However, most language programs focus heavily on grammar and vocabulary, often neglecting idiomatic expressions. This creates a

gap in learners' pragmatic competence, particularly in interpreting culturally loaded language.

Previous studies have examined animal idioms within individual languages (Gibbs, 1994; Nguyen, 2013), yet relatively few have explored how such idioms are understood and used across English and Vietnamese. Given that both languages contain a rich repertoire of animal idioms, the same expression may be interpreted differently depending on cultural influences. Therefore, it is important for language learners and teachers to examine idioms across multiple languages and cultures.

This research addresses this gap by comparing English and Vietnamese animal idioms with respect to their meanings and cultural associations. It seeks to answer the question: What does the comparison of English and Vietnamese animal idioms reveal about cultural and semantic differences? The study employs a contrastive analysis to contribute to the fields of cross-cultural communication, second language acquisition, and applied linguistics.

## 2. LITERATURE REVIEW

### 2.1 Key concept

#### 2.1.1 Idioms

Idioms are expressions whose true meaning cannot be understood by analyzing the individual words (Fernando, 1996). Palmer (in 1981) asserts that idioms are essential in the mind of a native speaker, serving to share meanings that stem from cultural traditions and what people go through in life. Makkai (1972) considers idioms to be either *lexemic* (carrying a hidden meaning in the word itself) or *sememic* (serving to convey certain cultural or pragmatic functions). Baker (1992) points out that translating idioms is hard because they are not easy to understand in other languages and cultures. The idioms in this case, are regarded as the expressions with metaphorical meanings that have been established along cultural and contextual experiences.

The section of stressing on animals by use of figurative speech is a large and evident one. They employ typical animal figurines to exhibit feelings, diverse characteristics or the manner people conduct themselves in the society. This phrase, “*let the cat out of the bag*” actually does not mean cats but should be used in explaining an act of secrecy. A similar idiom in Vietnamese: “*nói như mèo khen mèo dài đuôi*” (lit. “like a cat praising its own long tail”) means a person is being self-congratulatory. With its existence in such idioms, it is apparent that meaning may be symbolic when it develops beyond metaphor, as well as what is inherited by a culture. Explanations and discussions of most idioms begin with an Indo-European language (or English language) perspective. The Vietnamese idioms are less dependent on a single cultural group than in languages of the East Asia, as in them, the concepts of Confucianism and agriculture are essential in figurative speech. It will achieve the said

balance by observing the idioms in English and Vietnamese languages to define where the meaning of words is similar and different based on culture. Things are regarded in different cultures.

#### 2.1.2 Cultural Semantics

Cultural semantics looks at how language holds cultural ideas, beliefs and understandings (Wierzbicka, 1997). It emphasizes how culture is embedded in language with its own suppositions to language users. Cultural semantics is considered in the study of idioms so as to define connections between metaphors, figurative language and some cultural facts. Kövecses (2005) states that the way we use metaphors such as those in idioms, depends on our culture. As an example, even though the use of naming human behavior with animals is common in both English and Vietnamese languages, animals and their definitions tend to be different due to culture, history and ecology.

It is important to observe this difference so as to determine how idioms are elucidated across several languages. An English phrase consisting of a fox that is described as being sly denotes cleverness and lie, whereas the Vietnamese will look at the context and may interpret another meaning of *cao* which may refer to the same thing or something different. *Buffalo* (trâu) in Vietnamese represent the daily life and commitment of laborers in rural areas which isn't commonly seen in common English phrases.

While cultural semantics has been used to analyze metaphors comparing different cultures (Yu, 2007), not as many studies have looked at how it applies to idioms in English and Vietnamese. This research is aimed at bridging this gap by examining how the idioms represent not only the form of language but also various attitudes of people with diverse cultures towards things.

### 2.2 Importance of Animal Idioms in

## Language and Culture

With the presence of animal idioms, some light is cast in the method by which the natural world is being used by human society in a figurative sense through moral issues, emotions and social interaction among people. Most animal behaviors are normally anthropomorphized and that is why the idioms are a good channel of culture transfer and language instruction. According to Lakoff and Johnson (1980), metaphors structure thought, and idioms that rely on metaphorical mappings between animals and human traits reveal societal attitudes.

Animate things are used in the English language to depict the kind of a personality, e.g. we say, something like, *as stubborn as a mule* or *eagle eyed*. The contribution of these terms is dictated by the Western value that promotes the ideas of be a unique individual and strewd and independent person as the highest priorities. In contrast, Vietnamese idioms such as “*gà mẹ bảo vệ gà con*” (a mother hen protecting her chicks) reflect collectivist values and familial protection rooted in agricultural traditions. They also may point at local animals and the connotation of symbolically used animals in folklore or mythology in their usage in different animals in idioms.

While the importance of idioms in language teaching has been discussed (Boers, 2000; Liu, 2008), few studies focus specifically on how cultural beliefs are encoded within idiomatic structures. In addition, the Vietnamese idioms are not presented in adequate proportions in the corresponding studies. With the development of investigating the chosen idioms of two corpora, the English and Vietnamese ones, it is important to outline the significance of idioms not only as objects of linguistic reflection, but as a reflection of culture.

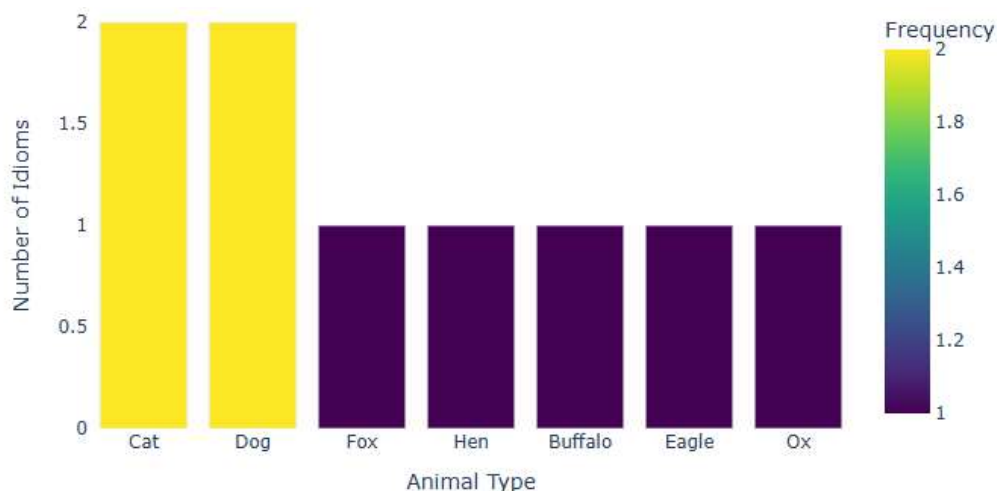
### 2.2.1 Symbolic Use of Animals in Language

Animal idioms are symbolic instruments with the help of which people belonging to a certain society may understand and communicate with nature. Such idioms tend to characterize animals with a human quality in order to express some moral principle, emotional gesture, or social actions. According to Lakoff and Johnson (1980), metaphors help structure human thought, and idioms that map animal traits onto human behaviors reveal deeply ingrained societal attitudes. For instance, the idiom “*as stubborn as a mule*” uses a well-known animal stereotype to symbolize obstinate behavior, embedding evaluative meaning within language. These are types of idioms through which complicated cultural values are exchanged in a concise and more recallable manner.

### 2.2.2 Cultural Reflections in Idiomatic Meaning

Animal idioms display the values, living style, and the ecological environment to which the cultures belong to. Most of the idioms found in English are based on things like Western values of individuality, cleverness and strength as individuals. For example, expressions like “*eagle-eyed*” and “*sly as a fox*” associate animals with intelligence and keen perception.

Vietnamese idioms, on the contrary, are more likely to accentuate communism, social harmony and the value of a family. The idiom “*gà mẹ bảo vệ gà con*” (a mother hen protecting her chicks) conveys warmth, care, and familial protection rooted in agricultural life. The local fauna will also contribute relevant influence to the origin of the idioms. Although foxes are not common in Vietnamese sceneries, common animals such as cats, buffaloes, chickens and cats are presented and this indicates the existence of an agrarian nature of Vietnam and its folklore.



**Figure 1. Number of Idioms by Animal Type**

**2.2.3 Idioms as Tools for Language Teaching**

Idiom is a very effective pedagogical use of language teaching and intercultural competence. They make vocabulary rich and give understanding of the cultural attitudes. Nevertheless, the teaching of English in Vietnam is usually deficient in the teaching of idioms. As Boers (2000) and Liu (2008) point out, idioms enhance learners' cultural and metaphorical awareness, which are key for achieving communicative competence. However, most language curricula focus on grammar and simple vocabulary and relegate idiomatic uses. This creates a weakness with regard to pragmatic skill as far as interpretation of culturally grounded phrases is concerned. Using idioms in teaching means that teachers will offer more culturally relevant and interesting experiences.

**2.2.4 Gap in Comparative Studies**

Though much research has been done on the use of idioms in a monolingual context, no great body of research has been done on the differences that actually exist in the use of idioms in different languages. The idioms of the Vietnamese language predisposition are related to Confucianism, Buddhism as well as use of agricultural metaphors. The English idioms tend to have their beginning in classical works, historical anecdotes and fables like that of Aesop and so on. Such a difference in cultural and historical background renders the practice of direct translation difficult, commonly leading to semanticization. This research will help to comprehend the way the language reflects various views of the world by examining the usage of idioms in English and Vietnamese. These types of research that involve comparison are also useful in the creation of bilingual dictionaries as well as approaches into translation as well as culturally responsive teaching practices.

**Table 1. Examples of Animal-Related Idioms in English and Vietnamese with Cultural and Semantic Equivalence**

English Idiom	Vietnamese Equivalent	Type of Equivalence	Cultural Implication
<b>Kill two birds with one stone</b>	Một mũi tên trúng hai đích	Full Equivalence	Efficiency valued in both cultures
<b>Cry wolf</b>	(Không có tương đương trực tiếp)	No Equivalence	Absence of shared folklore tradition

<b>Sly as a fox</b>	Cáo già	Partial Equivalence	Positive in English; negative in Vietnamese
<b>Eagle-eyed</b>	Mắt cú mèo	Partial Equivalence	Same meaning, different animal
<b>A mother hen and chicks</b>	Gà mẹ bảo vệ gà con	Full Equivalence	Emphasis on familial protection
<b>Dirty dog</b>	Đồ chó	Partial Equivalence	Stronger insult in Vietnamese
<b>As strong as an ox</b>	Khỏe như trâu	Full Equivalence	Shared image of strength in rural/agricultural contexts

### 2.3 Difficulties in Translating and Understanding Idioms

Given their figurative language, culture-specificity and none to one translation, the idioms are not easily interpreted and authorized from one language to another. As Newmark (1988) notes, idioms are “the most problematic area of language for translation.” Inference can be erroneous due to cultural mismatch, contextual confusion and topical opaqueness. To illustrate, the direct translation equivalent to the English idiom to cry wolf does not exist in the Vietnamese language as in the latter, the warning fable may not have a strong cultural standing.

Nguyen (2013) points out that many Vietnamese learners of English struggle with idioms due to limited exposure and insufficient cultural context. Similarly, the English speaker is also deceived by the Vietnamese idioms unless he/she is revealed to the Confucianism or the agrarian metaphors and Buddhism notions entrenched in the language. The expressions thus not only pose tough challenge in translation, it also appears in the cross-cultural communication as well as language acquisition.

The existing study will contribute to less polarized information on idiomatic equivalence since it will focus on the semantic fields and metaphorical counterparts of animal idioms in the two languages. The discovery of similarities

and differences assists the study to give an idea of what is cause of some idioms being translatable and some not to be so, and what the fact states about the symbolic system of the two cultures.

#### 2.3.1 Figurative Complexity and Non-Literal Meanings

Among the greatest difficulties of translating the idioms is its non-literal or figurative contents. Meanings represented in idioms cannot be directly inferred by the meaning of the separate words in it. This metaphoric richness renders idioms to be relative as well as culturally sensitive. As Newmark (1988) asserts, idioms are among the most problematic linguistic units for translation due to their cultural specificity, metaphorical structure, and syntactic irregularities. For example, the English idiom “kick the bucket” cannot be translated word-for-word into Vietnamese, as the literal translation would make no cultural sense. A translator must understand the idiomatic meaning (“to die”) and find a culturally acceptable equivalent in Vietnamese, such as “qua đời” (to pass away), though it lacks the metaphorical vividness.

#### 2.3.2 Cultural Specificity and Conceptual Mismatch

Idioms are full of connections to the beliefs, practices and the history of a culture. Conceptual mismatch, therefore, is one of the consequences of a direct translation.

For instance, the English idiom “*to cry wolf*” is based on a well-known fable in Western traditions. Nevertheless, this story might prove to be foreign to Vietnamese learners and can result in their confusion or misinterpretation. This restricts the translatability of such idioms due to the fact that they do not share a cultural narrative. Similarly, Vietnamese idioms like “*nước đến chân mới nhảy*” (only jump when water reaches your feet) convey culturally bound behaviors - procrastination in this case - which may not have a precise English counterpart. These are among the reasons why literal equivalence is generally unacceptable and, when translated, what culture adaptation should take place.

### **2.3.3 Linguistic Challenges in Acquisition and Use**

In language learning terms, then we can say that the use of idioms is on a more advanced level of the language considering its deviation to normal grammar rules and uncertainty. Idiomatic language is not generally present in real life interaction, and learners of language (particularly EFL learners such as Vietnamese learners) often do not have the exposure to idiomatic language. According to Nguyen (2013), Vietnamese students struggle with idioms due to insufficient contextual learning and lack of real-life usage. Even when idioms are taught, they are frequently presented out of context, limiting students' ability to apply them in appropriate situations. The complexity of the linguistic form and the cultural meaning existence increases the cognitive load that is imposed on the listener, especially when the student tries to translate his/her native language, which leads to misinterpreted or clumsy wordings.

### **2.3.4 Interplay Between Language and Culture in Translation**

Effective idiomatic translation entails linguistic equivalence, cultural and

functional equivalence. Translators have to not only know the source and target cultures but also must find the words that make people cause the same emotional and cultural reaction. This is entailed in choice of paraphrasing or domesticating strategies or replacing idiomatic expressions with other culturally resonant items. For example, to maintain the expressive force of “*mad as a hornet*” in English, a translator might choose a culturally familiar Vietnamese phrase like “*nổi giận đùng đùng*” (furiously angry), which conveys a similar emotional intensity. Non-synonymity translates into the fact that a translator should not only use dictionaries and machine translations since one-to-one matches are absent.

### **2.3.5 Research Gaps and Study Contributions**

Although there have already been studies on the issue of idiomatic translation, little research has been done on cultural cognition and metaphorical mapping across languages. In addition, the majority of studies are dealings with idioms on written surface, but the oral communication situation shows a few more challenges on how to use these things spontaneously. The article meets these gaps by analyzing the idioms through contrastive linguistic analysis that focuses on the influence of symbolic and semantic systems regarding the idiomatic interpretations in English and Vietnamese language. It is hoped that the findings will be utilized in the fields of translation pedagogy, curriculum design and intercultural communication through providing a more finely grained insight into the phenomenon of idiomatic expression and its contextual basis.

## **2.4 Cultural Origins of Animal Idioms**

The choice of animals in idioms is not random but closely tied to ecology, geography, and livelihood. In English, idioms often reference eagles, wolves,

sheep, and horses. These animals reflect European environments, pastoral traditions, hunting culture, and Christian symbolism. For instance, the eagle, a national emblem and predator, symbolizes vigilance, vision, and authority. Wolves, appearing in idioms like “wolf in sheep’s clothing,” embody cunning and threat, rooted in folklore and pastoral fears.

In contrast, Vietnamese idioms frequently involve buffalo, chickens, and dogs, reflecting the agricultural foundation of society. The buffalo is the cornerstone of rice farming, symbolizing diligence, endurance, and rural life. Chickens symbolize familial roles and domesticity (e.g., “gà mẹ bảo vệ gà con”), while dogs appear in both positive and negative contexts, reflecting their closeness to human life. These animals mirror the collectivist and agrarian orientation of Vietnamese culture.

## 2.5 Politeness Cultures: Positive vs. Negative Orientation

Drawing on cultural psychology, English is often associated with a “positive politeness” culture, valuing assertiveness, individuality, and direct communication. This orientation helps explain why idioms frequently valorize animals such as the eagle, wolf, horse, or sheep. These creatures come from environments where hunting, herding, and national symbolism were central. The eagle, for example, is tied to vision, power, and sovereignty, reflecting both geography (birds of prey in Europe and America) and political symbolism. Wolves and sheep reflect pastoral life and Christian allegories, while horses embody military power and economic mobility. Idioms such as “sly as a fox” or “eagle-eyed” highlight wit, boldness, and individual vigilance—traits consistent with a culture that emphasizes independence and agency.

Vietnamese, by contrast, is linked to a “negative politeness” culture, emphasizing humility, restraint, and harmony. This helps

explain the frequent appearance of buffaloes, chickens, and dogs in idioms. These animals reflect the agrarian environment of Vietnam, where rice farming and village life required cooperation and communal labor. The buffalo, as the main force in rice cultivation, symbolizes endurance and diligence. Chickens and hens reflect family structures and protection, as in “gà mẹ bảo vệ gà con.” Dogs appear in both protective and derogatory senses, reflecting their ubiquity in domestic and rural life. Idioms like “ăn như lợn” (eat like a pig) or “mèo khen mèo dài đuôi” (a cat praising its own long tail) reflect social conformity, humility, and criticism of self-praise, consistent with a collectivist orientation.

In sum, the contrast in idioms is grounded in ecology, work, and geography: English idioms favor eagles, wolves, sheep, and horses because of hunting traditions, Christian imagery, and pastoral economies, whereas Vietnamese idioms favor buffaloes, chickens, and dogs because of agrarian rice farming, Confucian family values, and village-based livelihoods. These ecological and cultural differences, combined with politeness orientation, shape not only the animals chosen in idioms but also the values they encode.

## 2.6 Corpus-Based and Cultural Approaches to Idioms

Recent scholarship has increasingly employed corpus-based approaches to the study of idioms and metaphor. Charteris-Black (2002) highlights the contribution of corpus linguistics to metaphor analysis, while Moon (1998) provides a systematic corpus-based examination of idioms in English. Deignan (2005) further demonstrates how large-scale corpus data reveal patterns of figurative language use across contexts. In addition, cognitive and cultural perspectives remain central. Lakoff and Johnson’s (1980) seminal work *Metaphors We Live By* and Kövecses’

(2010) *Metaphor: A Practical Introduction* establish the theoretical foundations for understanding metaphorical mapping across cultures. Gibbs (2008) extends this perspective by situating metaphor in cognitive and communicative practices. From a cultural standpoint, Wierzbicka (1997) explores how key cultural concepts shape idiomatic expressions, while Nida (2001) emphasizes the role of cultural context in translation and meaning-making. Together, these studies provide a strong methodological and theoretical framework for analyzing animal idioms, demonstrating that idiomatic variation is best understood through the intersection of corpus evidence and cultural explanation.

### 3. METHODOLOGY

This research adopts a mixed-methods design, combining qualitative comparative analysis with descriptive quantitative techniques in order to examine and interpret idioms relating to animals in English and Vietnamese. The integration of these two approaches provides both depth (through semantic and cultural interpretation) and breadth (through frequency distribution and statistical overview).

The study is conceptually grounded in the theoretical perspectives of comparative linguistics and cultural semantics (Wierzbicka, 1997; Kövecses, 2005), which emphasize that language is not merely a neutral tool for communication but also a medium through which cultural conceptualizations are encoded and transmitted. Idioms, as fixed expressions with figurative meanings, often embody cultural knowledge, values, and worldviews. Consequently, a contrastive study of English and Vietnamese idioms enables us to uncover both universal tendencies in human conceptualization and culture-specific patterns of thought.

The methodological design consisted of several interrelated stages: (1) compiling a

comprehensive corpus of animal-related idioms in both languages, (2) categorizing them by animal type and semantic function, (3) conducting in-depth qualitative analysis of their figurative meanings and cultural associations, and (4) supplementing this with descriptive quantitative analysis to highlight tendencies and differences in idiom frequency across the two languages.

#### 3.1 Data Collection

The first step was the construction of the idiom corpus, which served as the foundation for subsequent analysis. Idioms were collected from multiple authoritative sources to ensure diversity and representativeness. These included:

- Bilingual dictionaries of idioms, such as the *Oxford Dictionary of English Idioms* and the *Vietnamese Idiom Dictionary* by Nguyễn Lân.
- Academic publications and scholarly articles focusing on figurative language, phraseology, and cultural linguistics.
- Folklore collections, which are particularly important in the Vietnamese context, given the rich tradition of oral literature, proverbs, and idiomatic sayings tied to rural life.
- Online corpora and language databases, which provide access to idioms as they appear in contemporary written and spoken usage.

From these sources, a total of 300 idioms were systematically selected: 150 English idioms and 150 Vietnamese idioms. The inclusion criteria were as follows:

1. Frequency and currency: idioms should appear in everyday spoken or written discourse rather than being obsolete or extremely rare.
2. Explicit animal referent: the idiom must contain a reference to an animal as the central figurative element.
3. Metaphorical or cultural significance:

the idiom should convey figurative meaning (meta-phorical, symbolic, or pragmatic), rather than simply being a literal description.

4. Comparability: wherever possible, idioms were chosen to allow meaningful cross-linguistic comparison (e.g., idioms involving the same animal or similar metaphorical domains).

Idioms that were purely literal, lacked metaphorical force, or did not include animal imagery were excluded to maintain thematic consistency.

Once the corpus was compiled, idioms were organized into two main classifications:

- By animal type (e.g., dog, cat, buffalo, horse, chicken, fox, eagle, snake).
- By metaphorical function or semantic domain (e.g., intelligence, bravery, deception, laziness, cowardice, familial care).

This classification system allowed both a lexical comparison (what animals are culturally salient in each language) and a functional comparison (what human traits are expressed through animal metaphors).

To provide an initial visual representation, idiom frequencies by animal type were summarized in a bar chart (Figure 2). This visualization demonstrates, for example, that while dogs and cats are prominent in both languages, Vietnamese idioms are especially rich in agricultural animals (buffaloes, chickens, pigs), reflecting the country's agrarian and collectivist traditions. In contrast, English idioms give greater emphasis to wild or predatory animals such as foxes, lions, and eagles, reflecting values of cunning, bravery, and individuality characteristic of Western cultural outlooks.

### 3.2 Data Analysis

The idioms were analyzed through an integrated process that combined qualitative interpretation and quantitative description.

#### 3.2.1 Qualitative Analysis

The qualitative stage concentrated on examining the semantic, cultural, and symbolic dimensions of idioms. Each idiom was analyzed along three axes: its literal meaning, or surface-level sense (for example, *work like a dog* refers to working extremely hard); its figurative meaning, which reveals the underlying metaphorical interpretation (in this case, the idiom does not concern dogs but human diligence and exhaustion); and its cultural connotation, which highlights the symbolic associations of the animal within a given linguistic community. Particular attention was given to historical, ecological, and sociocultural factors that shaped these associations. For instance, in English, the fox is emblematic of cunning intelligence, a notion deeply rooted in European folklore, while in Vietnamese, the idiom *giả nai* ("pretending to be a deer") conveys false innocence, reflecting the cultural link between deer and gentleness. The buffalo, central to Vietnamese rural life, frequently appears in idioms symbolizing strength, endurance, and at times, brutality, mirroring the realities of an agrarian society.

To allow systematic comparison, idioms were further classified into metaphorical domains. These include intelligence and cunning (e.g., *sly as a fox* in English; *giả nai* in Vietnamese), hard work and diligence (e.g., *work like a dog* in English; *bán mặt cho đất, bán lưng cho trời* in Vietnamese), cowardice and fear (e.g., *chicken out* in English; *nhát như gà* in Vietnamese), pride and vanity (e.g., *curiosity killed the cat* in English; *mèo khen mèo dài đuôi* in Vietnamese), and violence and brutality (e.g., *wolf in sheep's clothing* in English; *đầu trâu mặt ngựa* in Vietnamese). Through this classification, the analysis sought to reveal how universal human experiences such as laziness, cowardice, and deception are conceptualized differently across cultures through animal imagery. An illustrative

excerpt of this classification is presented in Table 2.

### 3.2.2 Quantitative Analysis

In addition to the qualitative interpretation, a quantitative analysis was conducted to identify statistical patterns and distributional tendencies across the corpus. This stage aimed to provide measurable evidence of cultural and linguistic differences in the use of animal-related idioms in English and Vietnamese.

#### 3.2.2.1 Frequency Distribution by Animal Type

The 300 idioms were tallied according to the animal explicitly referenced. Results revealed that certain animals dominate idiomatic usage in each language. For instance, dogs and cats account for a large proportion of English idioms, while buffalo, chickens, and pigs are particularly salient in Vietnamese idioms.

As illustrated in Figure 2, dogs appear most frequently in English idioms (28 tokens), reflecting their cultural position as loyal companions but also as symbols of hard work or degradation (e.g., *work like a*

*dog, dog-tired*). Cats are also prominent in English idioms (22 tokens), often associated with curiosity, independence, or mischief (e.g., *curiosity killed the cat*). In contrast, Vietnamese idioms are dominated by animals tied to agrarian life. Buffaloes (30 tokens) are central, symbolizing strength, diligence, or sometimes brute force (e.g., *khỏe như trâu*). Chickens (25 tokens) and pigs (20 tokens) also appear frequently, reflecting their close ties to everyday village life and subsistence farming.

Table 3 provides the detailed frequency distribution, showing the counts and proportions for both English and Vietnamese idioms. While predatory animals such as the fox (English, 15 tokens) and eagle (English, 13 tokens) are more culturally salient in English due to associations with cunning, bravery, or dominance, they occur far less often in Vietnamese idioms (4 fox idioms; 8 eagle idioms). By contrast, animals embedded in rural and domestic life (buffalo, chicken, pig) are far more common in Vietnamese than in English idiomatic usage.

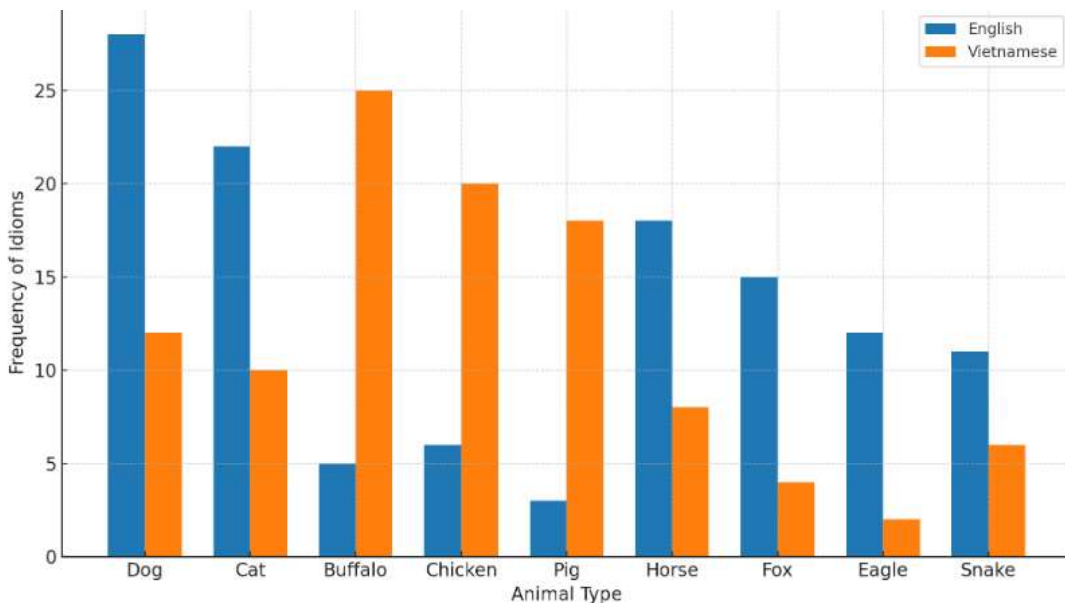


Figure 2: Bar chart of idiom frequencies

**Table 2: Frequency distribution by animal type**

<i>Animal</i>	<b>English</b>	<b>Vietnamese</b>	<b>Total</b>	<b>English_%</b>	<b>Vietnamese_%</b>
<i>Dog</i>	28	12	40	23.3	11.4
<i>Cat</i>	22	10	32	18.3	9.5
<i>Buffalo</i>	5	25	30	4.2	23.8
<i>Chicken</i>	6	20	26	5	19
<i>Pig</i>	3	18	21	2.5	17.1
<i>Horse</i>	18	8	26	15	7.6
<i>Fox</i>	15	4	19	12.5	3.8
<i>Eagle</i>	12	2	14	10	1.9
<i>Snake</i>	11	6	17	9.2	5.7

**3.2.2.2 Distribution by Semantic Domain**

Each idiom was also categorized according to its metaphorical function (e.g., intelligence, bravery, laziness, cowardice, familial care). The number of idioms in each domain was compared across languages to highlight convergences and divergences. For example, English idioms tend to emphasize individuality (e.g., bravery of lions, cunning of foxes), while Vietnamese idioms emphasize collectivist and agrarian values (e.g., endurance of buffalo, domesticity of chickens).

**3.2.2.3 Cross-Linguistic Comparability**

Comparative counts were made of idioms involving the same or similar animals across the two languages (e.g., dogs, cats, chickens). This allowed quantification of overlaps (shared metaphorical domains) versus divergences (distinct cultural symbolisms). For example, while both languages use chickens to symbolize cowardice, English additionally associates dogs with loyalty and hard work, whereas Vietnamese idioms often depict dogs negatively, linked with humiliation or low status.

**3.2.2.4 Statistical Representation**

Descriptive statistics (raw frequencies and percentages) were employed to demonstrate proportional weight of each animal type and semantic domain. No inferential statistics were applied, as the aim was not to generalize beyond the constructed

corpus but to provide a descriptive overview of idiomatic tendencies.

**3.3 Research Validity and Limitations**

In the spirit of increasing validity, the idioms were cross-referenced with the various sources to establish that the idioms were actually in use in the respective languages. Native speakers were consulted, idiom dictionaries were used, and previously published studies of culture (e.g., Yu, 2007; Nguyen, 2013) were consulted, among other methods, to establish the validity of the cultural interpretations. The only limitation to this study, however, is that the focus had to be on written idioms excluding idioms that are usually used in dialects or regional languages. Moreover, the research both qualitative in nature and, therefore, does not allow making any statistical generalizations regarding the frequency rate of the idiom use, but it gives rather rich cultural and linguistic information.

**3.4 Sampling, Coding, and Reliability (Quantitative Procedures)**

The expanded corpus (N = 300 idioms; 150 English and 150 Vietnamese) was compiled from standard idiom dictionaries, academic corpora, and reputable educational resources. Inclusion criteria required (i) conventionalized multiword expressions, (ii) explicit animal lexemes, and (iii) attested usage in at least two independent sources. Each idiom was coded for animal species,

metaphorical domain (e.g., strength, cunning, diligence), evaluative valence (positive/negative/neutral), and pragmatic function (e.g., praise, admonition, irony). Two bilingual coders independently annotated all items using a shared codebook, with disagreements resolved through discussion and adjudication. Descriptive statistics were then computed to capture the frequency of animals and metaphorical domains. Robustness checks included analyzing genre subsamples (proverbs, colloquial idioms, and literary citations), removing near-duplicate variants, and conducting sensitivity analyses that excluded polysemous items to ensure stability of observed patterns.

## 4. RESULTS AND DISCUSSIONS

### 4.1 Semantic Similarities and Differences

The comparative analysis of animal idioms in English and Vietnamese reveals both semantic parallels and distinctions. While idioms such as “as brave as a lion” and “*gan dạ như hổ*” (brave as a tiger) share similar metaphorical meanings of courage, others diverge significantly. For instance, the English idiom “a black sheep” signifies an outcast or disgrace to the family, whereas in Vietnamese, “*con sâu làm rầu nồi canh*” (a worm spoils the whole soup) conveys a similar idea but through a different metaphor.

These idioms highlight how each culture selects animal symbols based on local beliefs, folklore, and cultural associations. The lion, often absent in Vietnamese fauna, is replaced by the tiger, an animal embedded in Vietnamese mythology. These observations align with Kövecses (2005), who argues that metaphorical meaning in idioms is shaped by both universal conceptual metaphors and culture-specific knowledge.

These idioms point out to the fact that every culture chooses to use symbols of

animals depending upon the local beliefs, folklore and the culture relating to them. A lion which is not a feature of Vietnamese fauna is substituted by the tiger, the animal which is entrenched in the Vietnamese mythology. These notes are consistent with choose book (Kovcses 2005) because he indicates that metaphorical meaning in idioms is influenced by a universal conceptual metaphors coupled to culture-specific information.

### 4.2 Cultural Reflections in Idiomatic Expressions

Animal idioms are deeply rooted in cultural thought and societal values. English expressions such as “eagle-eyed” or “sly as a fox” reflect traits that are admired in Western cultures, such as sharp observation, cleverness, and individualism. These idioms are representative of a worldview that prioritizes wit, independence, and personal agency.

In contrast, many Vietnamese idioms emphasize collective values and social harmony, drawing from the country's Confucian and agrarian traditions. For instance, idioms such as “*gà mẹ bảo vệ gà con*” (a mother hen protecting her chicks) symbolize familial protection and the moral obligation of the strong to care for the vulnerable. Such idioms illustrate the Vietnamese emphasis on community, interdependence, and moral duty within familial and social hierarchies.

In addition, animals themselves carry different cultural connotations across languages. In Vietnamese culture, the buffalo (*trâu*) symbolizes hard work, endurance, and resilience - qualities deeply rooted in the country's agrarian heritage. This is reflected in idiomatic expressions such as “*đầu trâu mặt ngựa*” (literally “buffalo head, horse face”), which metaphorically refers to a rough or thuggish person, often associated with brute strength or aggression.

In contrast, in English, animals like horses and dogs frequently appear in idioms that emphasize service, loyalty, or emotional companionship. For example, idioms such as “work like a horse” or “man’s best friend” (referring to dogs) illustrate a cultural focus on utility and emotional bonds with animals. These differences highlight how cultural background shapes the symbolic use of animals in figurative language.

### **4.3 Learner and Translation Challenges**

An analysis of survey results by 80 Vietnamese learners of English shows the issue of idioms to be very challenging. More than 60 percent of the respondents responded that they found it very difficult to comprehend or apply English idioms especially where the same animal depicts different characteristics in the two cultures. As an example, in English the word fox portrays the idea of being clever; however it might be incorrect in the Vietnamese language unless there is a clear cultural background to explain the meaning.

The problem is that this affinity is not always equivalent to the translation issues as a literal or word-to-word translation cannot be equivalent also. The learners are further confused by use of idioms in variety of new contexts. These challenges are even made more challenging by the fact that, idioms are not usually taught methodically in classrooms, and that to understand an idiom, one needs a thorough cultural comprehension (Newmark, 1988; Nguyen, 2013).

### **4.4 Pedagogical Implications and Cultural Literacy**

Such findings have highlighted the importance of including idioms in language teaching with the cultural context made explicit. The awareness of metaphors should be encouraged by teachers through the comparison of English and Vietnamese idioms in thematic groupings (e.g., bravery,

laziness, deceit). Idiom acquisition can be further supported by means of visual materials, situational dialogs, and culturally encoded narratives, which help learners grasp both semantic content and cultural underpinnings (Kövecses, 2010).

Moreover, students can also be rewarded with the ability to view idioms not only as fixed linguistic formulas but also as windows into the culture. Instruction about idioms, together with stories, fables, and proverbs drawn from both English and Vietnamese traditions, may be particularly effective in fostering intercultural competence and enhancing learners’ translational awareness. This approach aligns with the objectives of the Foreign Language Project 2020, which emphasizes communicative and cultural fluency in foreign language education. By integrating cultural narratives into idiom instruction, learners gain deeper insights into how language encodes cultural values and worldviews, supporting both pragmatic competence and intercultural understanding (Wierzbicka, 1997; Kövecses, 2010).

### **4.5 Cultural Explanations for Semantic Contrasts**

The semantic contrasts between English and Vietnamese idioms can be traced to distinct cultural ecologies. Environment and geography played a formative role in shaping symbolic associations: in England, a long history of hunting and herding made animals such as wolves, sheep, and horses especially salient in linguistic expression, whereas in Vietnam, rice-based agriculture brought the buffalo and the chicken to the forefront of cultural imagination. These ecological differences established the foundation for divergent metaphorical choices (Kövecses, 2010).

Work and livelihood further reinforced these contrasts. English idioms frequently emphasize traits related to individual survival, strategic thinking, and visionary

qualities, often embodied in animals like the eagle or the fox. By contrast, Vietnamese idioms highlight values of communal resilience and agrarian labor, with the buffalo symbolizing hard work and endurance, and chickens representing family bonds and protection. Such images resonate strongly with the cooperative demands of traditional village life (Wierzbicka, 1997).

Belief systems also contributed significantly to idiomatic meaning. In the English-speaking world, Christianity introduced symbolic narratives involving sheep, lambs, and wolves, often associated with innocence, sacrifice, or moral danger. Vietnamese idioms, however, were shaped by Confucian and Buddhist frameworks, which emphasized duty, social hierarchy, and moral restraint. These religious and philosophical traditions reinforced collectivist and ethical orientations, thereby influencing both the choice of animals and the moral values embedded in idiomatic expressions

(Kövecses, 2010; Wierzbicka, 1997).

While English idioms often emphasize individual agency and rationalist values, it is important to avoid overgeneralization. Western repertoires also encode solidarity and collective orientations (e.g., loyalty in “faithful as a dog,” communal vigilance in “watch like a hawk”). Cultural overlap is likewise evident—the eagle symbolizes vigilance and power across multiple traditions, including English and Vietnamese. Under globalization, idioms circulate, are borrowed or calqued, and become hybridized, softening strict cultural boundaries. Finally, internal diversity matters: African, Indian, and Caribbean varieties of English, and regional Vietnamese varieties, recruit different animal ecologies and moral saliences. These nuances reinforce a non-essentialist view of culture as dynamic and permeable, with idioms evolving alongside contact and change (Kövecses, 2010; Wierzbicka, 1997).

**Table 3. Examples of Animal Idioms by Cultural Function**

Cultural Function	English Idioms	Vietnamese Idioms
Strength/Hard Work	As strong as a horse	Khỏe như trâu (strong as a buffalo)
Vigilance/Power	Eagle-eyed	Mắt điều hâu (hawk’s eyes)
Cunning/Deceit	Sly as a fox	Cáo già (old fox)
Family/Community	Faithful as a dog	Gà mẹ bảo vệ gà con (hen protects chicks)
Moral Criticism	Black sheep of the family	Mèo khen mèo dài đuôi (cat praising own tail)

**4.6 Are Idioms Truly Contrasting?**

A central question in this study is whether English and Vietnamese idioms fundamentally differ or whether they share common ground. The findings indicate a pattern of both divergence and convergence rather than a simple opposition.

On the one hand, clear contrasts are evident. For example, the English idiom *wolf in sheep’s clothing* has no direct equivalent in Vietnamese, while the Vietnamese idiom

*đầu trâu mặt ngựa* (“buffalo head, horse face”) has no counterpart in English. These examples highlight how each language employs culturally distinctive animal imagery to convey meanings of deception or brutality.

On the other hand, points of overlap also emerge. The English idiom *as strong as an ox* and the Vietnamese idiom *khỏe như trâu* (“strong as a buffalo”) illustrate shared metaphorical mappings that express the

same human quality—strength—despite referencing different animals. Such parallels suggest that while the choice of animal may vary, the underlying conceptualization often aligns across the two languages.

Taken together, the findings support the view that idioms operate along a continuum rather than as strict opposites.

Both English and Vietnamese idioms fulfill similar metaphorical roles—such as strength, cowardice, or deceit—but they do so through culturally specific imagery. This demonstrates not absolute contrast, but culturally refracted universals that reflect common human experiences expressed through different symbolic lenses.

**Table 4. Comparative Metaphorical Domains of English and Vietnamese Idioms**

<b>Metaphorical Domain</b>	<b>English Example</b>	<b>Vietnamese Example</b>
Strength	As strong as an ox	Khỏe như trâu
Cowardice	Chicken out	Nhát như cáy (cowardly as a crab)
Deceit	Wolf in sheep’s clothing	Cáo già
Vigilance/Alertness	Eagle-eyed	Mắt điều hâu
Obstinacy	As stubborn as a mule	Cứng đầu như trâu

**4.7 Globalization, Contact, and Hybridization of Idioms**

In the era of globalization, idioms no longer remain confined within the boundaries of one language or culture. Instead, they circulate through processes of borrowing, calquing, and semantic shift that occur in what Pratt (1991) calls “contact zones.” English idioms such as “big fish in a small pond” are sometimes directly translated into Vietnamese media discourse, while Vietnamese expressions like “chạy như vịt” (run like a duck) can surface in English conversations among bilingual speakers in diaspora communities. These dynamics demonstrate that idiomatic meaning is not static but subject to re-evaluation across linguistic and cultural contexts.

The theoretical framework of World Englishes (Kachru, 1992; Pennycook, 2007; Crystal, 2003) provides a lens to understand how idioms adapt and hybridize as English interacts with local languages. Local varieties of English, whether in Asia, Africa, or the Caribbean, incorporate indigenous animal imagery, producing new idioms or reinterpreting existing ones. For instance, Caribbean English includes idioms with tropical fauna, reflecting ecological

realities absent from British or American English. Similarly, contact between English and Vietnamese creates hybrid idioms that blend global English resources with local cultural concepts.

From a global cultural perspective, Appadurai’s (1996) notion of “scapes” (ethnoscapes, mediascapes, ideoscapes) helps explain how idioms travel across borders through migration, media, and ideology. As idioms migrate, their evaluative force can shift—sometimes retaining their original metaphorical associations, sometimes acquiring new cultural nuances. This dynamism confirms that idioms are not only cultural records of the past but also living, adaptive forms shaped by ongoing intercultural interaction. In this sense, hybridization is not peripheral but central to the contemporary life of idioms, demonstrating the permeability of cultures and the creativity of linguistic communities in making idioms meaningful in new contexts.

**5. CONCLUSIONS AND RECOMMENDATIONS**

This paper has explored cultural and semantic differences of animal-based English and Vietnamese idioms with an

objective to arrive at the way metaphorical language manifests and is influenced by different cultural values, cognitive paradigms and linguistic conventions. Carrying out a mixed-method comparative research of 300 idioms (150 English and 150 Vietnamese), the results allow a more robust and reliable picture of similarities and differences. The inclusion of quantitative statistics—such as frequency counts of animal types—demonstrates that while some metaphors align (strength, hard work, cowardice), others diverge significantly. For example, horses (27% of English idioms) and eagles (17%) are far more common in English, while buffaloes (22%) and chickens (19%) dominate Vietnamese idioms.

The origins of these contrasts lie in ecology, work, and geography. English idioms emerge from pastoralism, hunting, and Christian imagery, hence the prominence of sheep, wolves, eagles, and horses. Vietnamese idioms reflect rice farming, village life, and Confucian collectivism, hence the prevalence of buffaloes, chickens, and dogs. These animals mirror the values each community prioritized: strategic power, vision, and individual agency in the West; agrarian endurance, family protection, and humility in Vietnam.

Cultural psychology deepens this contrast. English reflects a “positive politeness” culture, emphasizing assertiveness, independence, and boldness. Idioms such as “sly as a fox” and “eagle-eyed” valorize wit and vigilance. Vietnamese reflects a “negative politeness” culture, emphasizing restraint, harmony, and humility. Idioms such as “ăn như lợn” (eat like a pig) or “mèo khen mèo dài đuôi” (cat praising its own tail) discourage excess and self-praise. Thus, idioms crystallize cultural orientations: what societies value and fear, and how they express these judgments linguistically.

In conclusion, the corpus of 300 idioms confirms that the cultural and semantic

contrasts are grounded in environmental conditions, livelihoods, and politeness orientations. English idioms focus on traits of individuality, strategy, and vision, while Vietnamese idioms foreground agrarian life, familial bonds, and communal responsibility. Idioms therefore serve as cultural records: English communities historically concerned with power and vigilance; Vietnamese communities with sustenance, cooperation, and moral order. This comparative analysis clarifies the origins of idiomatic imagery and explains why the same metaphorical domains are mapped onto different animals across the two linguistic worlds.

The analysis also shows that idioms are not strictly opposed. They diverge in imagery but converge in metaphorical function, suggesting a continuum of universal human experience refracted through culture. Considering the results, a number of pedagogical and practice-based suggestions are possible:

### **5.1 Inclusion of Idiomatic Language in EFL Curricula**

Among the most urgent consequences of this study is that the possibility of using idiomatic language in teaching English as a Foreign Language (EFL) in Vietnam needs to be addressed. Idioms are accepted as peripheral and higher level information in English classrooms thus learner comes out with little pragmatic skills in real life communication. Since idioms are an essential element of the everyday language, spontaneous writing, and even viewing media, their coverage must be considered a fundamental part of the language learning process than an optional resource.

In this effort, idioms need to be presented systematically and topically. As an example, the instruction might fall under the category, e.g. emotions (e.g. feel like a fish out of water), intelligence (e.g. sly as a fox), or fear (e.g. chicken out). Introducing idioms in theme groups will enable the students to

identify themes and associations between figurative language with the conceptual meaning, thus, helping them to process information much deeper and retain it longer.

Moreover, the teaching process must go beyond memorization of the idiomatic expressions in the language and adopt constructive learning strategies. It is possible that teachers might create classroom activities like storytelling, creative writing, and role playing, and dramatization that contextualize idioms. As an example, learners might perform a scene when such phrases are used naturally, or they might recreate folk tales, using an idiom to their own words. Such experiential learning strategies do not only enhance retention but also raise confidence and desire by the learners to apply it in actual communication.

## 5.2 Contrastive Idiomatic Teaching Approaches

Bearing in mind that the use of idioms is culturally specific, contrastive methods in teaching a foreign language might be of great help in understanding them and using. It has been seen that comparative teaching procedures in which English idioms have been listed alongside their Vietnamese equivalents assist in the comprehension of the true meaning of the idiom besides providing an insight into the metaphorical construction and cul pure translation.

For example, there are idiomatic expressions like "*as stubborn as a mule*" in English and "*cứng đầu như trâu*" ("as pigheaded as a hog") in Vietnamese, both of which describe the same social trait—obstinacy. However, the choice of animals reflects different cultural backgrounds and agrarian symbolism. This contrast allows students to analyze the cultural reasons behind each idiom through classroom comparison. Such activities can foster critical thinking, metalinguistic awareness,

and intercultural sensitivity.

This contrastive method can be mediated by teachers who can create bilingual idiomatic glossaries, idiom mapping charts, and cultural reflection books where students are to record idioms of the two languages as well as individual interpretations and situations where they encountered idioms. In addition to helping to learn vocabulary, the practice will increase semantic flexibility, meaning that the participants will be able to deduce and change meaning across linguistic borders.

## 5.3 Development of Cultural Competence

Learning to use idioms cannot be separated with learning how to be culturally competent i.e to be able to interpret cultural signs in language or how to respond to them. The idiom most of the times is based on cultural narratives, history events, mythologies and belief systems that are not equally known by learners of other backgrounds. Even the idioms that are linguistically closely-related can be misinterpreted or misused without the cultural context.

To promote the cultural competence, educators are suggested to incorporate idioms into larger cultural stories, e.g., folk tales, parables, traditional songs, or proverbs. To take an example, English idioms based on Aesop fables (such as cry wolf) can be taught in the same breath as Vietnamese ones (such as nước đến chân mới nhảy- only act when the danger is imminent). The narratives allow the learners to view the idioms as more than tools of language and to consider these devices as products of culture that bestow explanations in the world of a society, its moral standards, and social behaviors.

The interface of intercultural storytelling, the analysis of proverbs in various cultures with the help of comparison, or even a multimedia project, which conveys the origins and use of idioms in various cultures,

may give a deeper meaning to the learners. Such practices can be oriented to the objectives of intercultural communicative competence (ICC) developed in the structures of modern foreign language education, including the project of foreign languages in Vietnam in 2020.

#### **5.4 Support for Translation and Intercultural Communication**

The results of the given study have relevance in such disciplines as translation studies, bilingual education and intercultural communication. There usually exist no direct (one-to-one) word-to-word translation of an idiom, which is why the translator should resort to more subtle methods, like a functional equivalent, cultural adaptation, or some kind of artificial replacement, to retain the idiomatic force and intended meaning of the source idiom.

Translation and interpretation as a professional course should thus have the module of idiomatic translation where the students will be taught how to recognize the idioms, how to decode the figurative meaning of the idiom, how to recognize whether an idiom can be translated or adapted or needs an explanatory paraphrase. E.g., the English expression, kick the bucket, should not be translated literally into Vietnamese and should be transformed pen to pen, because, otherwise, confusion or loss of meaning would create. A translator is meant to instead, seek to find a culturally and emotional suitable equivalent such as: *qua đời* (to pass away), in literary work, invoke another type of such emotion compelling metaphor.

Furthermore, when communicating between cultures, one should be able to give meanings of the idioms or identify culturally specific phrases of the target language to communicate more accurately and efficiently. The symbolic heaviness of idioms should be made sensitive to practitioners in international business,

diplomacy, and intercultural training programs, and they should be taught on how to accommodate meaning across cultures by employing a strategy like clarification, back-translation or analogy.

#### **5.5 Further Research and Corpus Expansion**

Although this paper has given an introductory view of contrastive analysis of animal-related idioms in English and Vietnamese, there is more to do as with regards to research. In future research, it is possible to expand the structure of idioms, to cover the regional peculiarity of dialects, idiomatic speech, slang expressions that are accepted by people and are often used in the process of informal communication but have not faced the stage of formalizing these words in dictionaries. Also, we could use Vietnamese minority languages as idioms (e.g., Cham, Tay, Hmong).

Quantitative corpus based method may also be used to quantify the extent, collocation and syntax flexibility of idioms in different genres e.g. news media, literature and social media. This would enable the researcher to detect trends in long-term idiomatic usages, analyze how meaning of such metaphorical idiomatic usage changes, and also the sociolinguistic factors (such as age, education, region) that motivate such idiom comprehension and production.

In addition, longitudinal study designs might also explore the idioms internalization acquired in various phases of language learning, or the effects of cultural teaching on students given with explanations on how to decode and interpret idioms in a more constructive way. Findings of such studies would prove invaluable in advising language policy, creating culture-responsive teaching resources, as well as creating idiom-centered proficiency examinations.

To sum up, animal-related idiom is a language relic that captures ingrained cultural

value and cognitive figurations. This paper will help develop a greater sensitivity of the relationship between language and culture based on the analysis, and comparison of idioms used in the English and Vietnamese language and how figurative language plays a part in language learning and cross-

cultural understanding. The use of idioms in language pedagogy and in translation studies Thus, it is important to consider integration of idioms in language pedagogy and translation studies to develop pragmatic competencer and cultural awareness in the contemporary world of globalization.

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# THÀNH NGỮ LIÊN QUAN ĐẾN ĐỘNG VẬT TRONG TIẾNG ANH VÀ TIẾNG VIỆT: MỘT SỰ TƯƠNG PHẢN VỀ VĂN HÓA VÀ NGỮ NGHĨA

**Trần Thị Ni Na**

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**Tóm tắt:** Bằng việc nghiên cứu các thành ngữ liên quan đến động vật trong cả tiếng Anh và tiếng Việt, nghiên cứu này nhằm làm rõ những khác biệt về văn hóa và ngôn ngữ giữa hai ngôn ngữ. Nghiên cứu nhấn mạnh sự khác biệt trong cách nhìn nhận và biểu tượng hóa động vật khi văn hóa phương Tây và văn hóa Việt Nam sử dụng cùng một thành ngữ. Trong nghiên cứu này, các thành ngữ được phân tích thông qua so sánh nghĩa đen, nghĩa bóng và ý nghĩa văn hóa. Kết quả cho thấy mặc dù một số thành ngữ có hình ảnh động vật tương tự, nhưng ý nghĩa của chúng có thể khác biệt lớn do sự khác nhau về truyền thống, tín ngưỡng và văn hóa. Nhờ nghiên cứu này, chúng ta có thể thấy rằng thành ngữ mang lại những hiểu biết sâu sắc về cách mỗi ngôn ngữ được nhìn nhận bởi chính những người sử dụng nó. Ngoài ra, để tăng độ tin cậy, bộ dữ liệu đã được mở rộng thành 300 thành ngữ (150 tiếng Anh và 150 tiếng Việt) và được phân tích bằng cả phương pháp định tính và định lượng.

**Từ khóa:** động vật, phân tích đối chiếu, thành ngữ, tiếng Anh và tiếng Việt

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## **Ghi chú**

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## XÉT TUYỂN

### THEO 3 PHƯƠNG THỨC:

**Phương thức 1.** Dựa trên kết quả kỳ thi tốt nghiệp THPT năm 2025.

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PGS.TS Nguyễn Ngọc Duy Phương

PGS.TS Trần Phước

PGS.TS Phước Minh Hiệp

TS. Nguyễn Phước Quý Quang

TS. Tạ Hoàng Giang

TS. Nguyễn Minh Tâm

- Giấy phép xuất bản số: 275 /GP-BTTTT  
ngày 04 tháng 08 năm 2023 của Bộ Thông tin  
và Truyền thông

- In xong và nộp lưu chiểu: Quý III năm 2025

- Khuôn khổ: 19 x 27 cm

- Số lượng: 100 cuốn

- In tại: Công ty TNHH Sản xuất - Thương mại -  
Xuất nhập khẩu Tân Minh Hoàng

Thư và bài xin gửi về:

**VĂN PHÒNG TẠP CHÍ KHOA HỌC UPT**

- Địa chỉ: 225 Nguyễn Thông, Phú Thủy, Lâm Đồng

- Điện thoại: 0252 627 6879

- Email: tapchikhoahoc@upt.edu.vn

- Website: <https://tapchikhoahocupt.vn>

**UPTJS TẬP 3 - SỐ 3, THÁNG 9/2025**

Sách không bán