

Application of Project-based Learning to Improve the Learning Styles of Tourism Students at Hanoi Open University

Pham Dieu Ly^{1*}, Nguyen Thi Thao¹, Phan Thi Phuong Mai¹

¹ Hanoi Open University, Vietnam

*Corresponding author's email: lypd@hou.edu.vn

*  <https://orcid.org/0009-0002-9073-0957>

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ABSTRACT

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Learning styles are diverse ways that people learn and process information. They can impact how their learners understand, retain, and apply new knowledge. That is why understanding learner's learning styles can help improve their learning process and lead to better performance. In the context of the Faculty of Tourism – Hanoi Open University (FOT-HOU), the researchers had an opportunity to observe students' typical learning styles and recommended an appropriate solution to maximize them for their personal development. A survey based on the questionnaire of Honey and Mumford (2000) analyzed the typical learning styles suitable for tourism students. The results have determined that the effective style for learning tourism English at FOT-HOU is the combined transformation of all four learning styles. Project-based learning is the solution to help the students approach and improve their self-study capacity for learning tourism English in the most effective way.

Introduction

In the current era, foreign languages are increasingly mentioned as an indispensable factor in creating the premise for international integration, industrialization, and modernization of a country. They are especially essential to tourism staff who need to meet various requirements of customers from all over the world (Bilodid, 2022). Therefore, as a preparation for their future career, tourism students have to make great efforts to improve their proficiency in at least one foreign language, which should be English, an international language (Lertchalermtipakoon, 2021 & Tran, 2021). Since learning styles play a key role in study efficiency, identifying suitable learning styles for English in general and tourism English specifically, as well as an effective way to improve their learning style, is of great concern. When students acquire the English learning styles that suit them, they can shorten their learning time, and enhancing knowledge and skills will become simpler, easier, and more effective (Cuevas, 2015). At the Faculty of Tourism - Hanoi Open University (FOT-HOU),

English is a mandatory foreign language for all students. However, their learning tourism English is still not effective. One of the causes could be the lack of an effective learning style. With an effort to find out the most appropriate learning style for tourism students at FOT-HOU as well as the testimonial on whether a proposed project could be an effective tool to reinforce the transformation of learning styles amongst our students, we conducted the study titled ***“Application of Project-based learning to improve the learning styles of tourism students at Hanoi Open University”***. The study was aimed to answer the following research questions:

1. What is the typical learning style for tourism students at the Faculty of Tourism – Hanoi Open University?

2. How did the project "The Feeling of Tourists on their Visits to Vietnam" help improve the learning styles of tourism students at the Faculty of Tourism – Hanoi Open University?

Literature review

Learning styles

The term "Learning Style" only appeared in the 50s of the twentieth century, when Thelen (1954) stated that one of the conditions for organizing group discussion activities in the teaching process is the need to rely on learning styles that students practice. Since then, there have been many studies around the world on learners' learning styles, leading to many different definitions and concepts. Rose (1985) stated that learning styles are approaches to different learning measures. Some people learn effectively through observation, others through listening or a hands-on approach. According to Reid (1995), learning style refers to the way in which learners absorb, process, and store new information and master new skills. Duff and Duffy (2002) clarified learning styles as a combination of cognitive, affective, and psychological factors for how individuals interact and respond to the learning environment and that learning style is a way done by someone in carrying out activities of thinking, processing, and understanding information. Given all these details, it is noteworthy that learning styles are diverse and personal. They can be seen as separate learning methods that each learner chooses to receive information, and it is related to his or her preferences for different types of learning activities. When learners know their own learning styles, they can see their strengths and weaknesses and, thereby, choose appropriate learning methods to promote their strengths and improve their weaknesses.

Since the 1960s, the focus of language teaching has shifted from teachers to students. Accordingly, the research focus of foreign language educators and researchers has shifted from teaching methods to the learning process and the characteristics of language learners themselves. The academic community has basically reached a consensus that the learning efficiency of learners can be improved by offering them proper learning content organization methods according to their different learning styles and guiding their personalized learning styles during learning (Li, 2021). That context pushed up the demands of the learning environment and the student's own experiences regarding what learning styles work best for

them in these environments. Learning styles would be relatively stable if the choice of learning styles is influenced by relatively stable factors such as certain characteristics of the environment, students' personal attributes, and long-term exposure to particular modes of discourse. Conversely, if others influence the choice of learning styles, they would be more transient or less stable, involving environmental demands and short-term objectives (cramming for an examination is an example). Since both kinds of influence co-exist, the choice of learning styles at any given time depends on the balance between the different factors and the student's own preferences. In other words, the choice of learning styles can be transformed by teachers' appropriate methods and students' preferences.

The models of learning styles

Since learning styles are diverse, personal, and susceptible to transition, it is necessary to identify the number of learning styles, which style is best for specific language learners, and how different styles are transformed.

In 1975, American psychologist David Kolb, along with Roger Fry, developed the widely-known "Experiential Learning" model. This model, also known as the four-stage learning model, clarifies that there is not just one learning style but four styles that are transferred in a cycle beginning with concrete experience, followed by reflective observation, abstract conceptualization, and active experimentation. In practice, the learning cycle is more like a spiral learning process where theory and practice are conceptualized and reconceptualized, with each spiral deepening the student's understanding. Kolb (1984) also suggested effective learning is seen when a person progresses through a cycle of four stages: (1) having a concrete experience followed by (2) observation of and reflection on that experience, which leads to (3) the formation of abstract concepts (analysis) and generalizations (conclusions) which are then (4) used to test a hypothesis in a future situation, resulting new experiences. Ideally, activities and material should be developed in ways that draw on abilities from each stage of the experiential learning cycle and take the students through the whole process in sequence.

Using Kolb's experiential learning theory (1973) and Kolb's learning style questionnaire (1984) to discover how individuals learn, Peter Honey and Alan Mumford spent four years experimenting with different approaches to assess individual differences in dominant learning styles and launched the Learning Styles Questionnaire (LSQ) in 2000. The questions probe general trends in behavior instead of direct questions. Honey and Mumford's questionnaire is designed based on understanding attitudes and behaviors to identify learning styles, thereby developing and improving learning and applying individual strengths in their comprehensive development.

Honey and Mumford's learning styles model (1992) identifies four different styles, namely ***Activist, Theorist, Pragmatist, and Reflector***:

Activist people like to learn through movement, participating in new experiences, and reacting immediately without thinking about possible consequences. They learn best when they engage with new experiences, problems, and opportunities, work with others on problem-solving, games, and role-playing exercises, or lead a group. On the other hand, they

learn least when they listen to lectures, read long explanations, analyze and interpret a variety of data, and follow instructions exactly. As a result, they can choose learning activities as follows:

- Participating in group discussions and debates
- Engaging in role-playing or simulations
- Taking part in interactive workshops or training sessions
- Conducting experiments or practical experiments
- Engaging in physical activities or sports that involve learning.

Theorists like to learn based on theory, are logical, objective people, like to list and synthesize, and do not like subjective or intuitive assessments. They learn best when an activity is supported by ideas and concepts that form a model, system, or theory; the situation is structured with a clear purpose; many questions and probes are given out; a complex situation needs to be analyzed for comprehension. They learn least in situations that emphasize feelings and emotions, with unstructured or ambiguous activities, or when they are asked to act without knowing the principles or concepts involved. Here are the best activities that maximize their learning outcomes:

- Reading and studying textbooks, research papers, or academic articles
- Analyzing theoretical frameworks and models
- Engaging in critical thinking exercises and debates
- Engaging in lectures or presentations that emphasize conceptual understanding.
- Applying logical reasoning and making connections between theories and real-world examples

Pragmatists like to experiment and look for new ideas that can be applied to solving problems, but they are impatient with inconclusive discussions. They learn best when there is a clear link between the topic and the current need; they can try things with expert feedback; they can copy an example or simulate a model. However, they learn least when what they learn has no immediate practical benefit; there are no clear instructions on how to do that, or what they learn seems to be all theoretical and not practical. For someone who is a Pragmatists and focuses on practical learning, these activities can benefit them the most:

- Participating in hands-on workshops or training programs
- Engaging in real-world problem-solving or case studies
- Applying knowledge in practical projects or assignments
- Undertaking internships or work experiences
- Engaging in experiential learning activities, such as field trips or site visits

Reflectors like to learn through observation, thinking about problems, considering all aspects before making decisions, and spending a lot of time listening and observing. Reflective

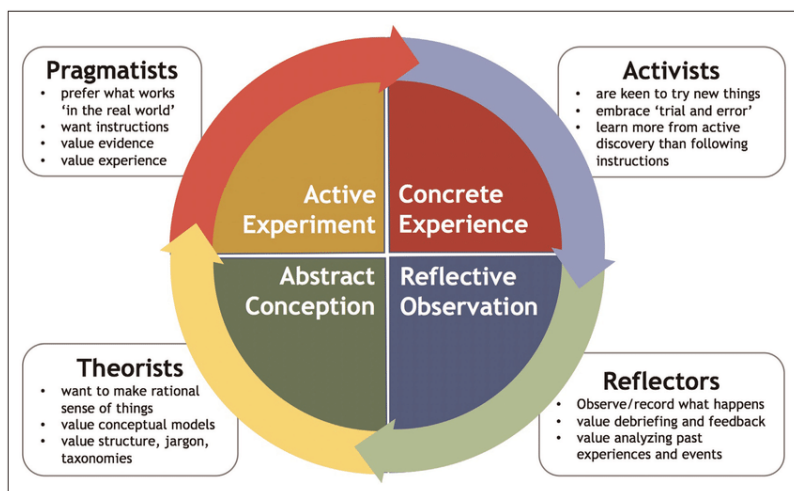
people learn best when they can stand back and observe first, take time to think and investigate before commenting or taking action, be given the opportunity to review what happened or do tasks without strict deadlines. Reflective people learn least when they are forced to take the lead in a group, do everything without preparation, or are rushed by deadlines. Reflectors can implement the following activities:

- Journaling or keeping reflective diaries.
- Engaging in introspection and self-reflection exercises
- Analyzing case studies or real-life scenarios
- Reviewing and summarizing information
- Participating in reflective discussions or peer feedback sessions

Understanding the above four different learning styles is significant for educators to successfully achieve teaching and learning objectives. Proactive teachers will strive to ensure that teaching and learning are implemented based on learning styles that fit in with the abilities of students. They can also find the best activities to maximize the strengths and minimize the weaknesses of each style. (Husin et al., 2011).

From Kolb's and Honey and Mumford's models, learning styles are linked to four stages in the learning cycle as follows:

Chart 1. Adapted from Kolb's learning cycle (1984) and Honey and Mumford's learning styles (1992)



According to the diagram, it can be easily seen that the learning styles of Honey and Mumford originate from and are closely related to Kolb's experiential learning cycle; the ultimate goal of Honey and Mumford is that learners will become proficient in all four learning stages in the learning cycle and apply an appropriate style when possible because learning styles are not rigid categories. The two authors emphasized that there is no single style that has an overwhelming advantage over other learning styles. Each learning style has its own strengths and weaknesses, and learning styles can be modified according to the learner's wishes to suit learning purposes. The authors also suggested that learners should

know their dominant style but should not limit themselves to just one style. They should experiment with strategies and techniques that align with other learning styles as well. The key is to leverage their strengths and preferences while remaining open to alternative approaches that enhance their learning journey. In other words, the authors mean that learners should try to become well-rounded learners.

In addition, the list of learning style questionnaires that Honey and Mumford (2000) offered helps learners recognize their own learning styles, thereby helping them choose learning methods that are suitable for their learning styles.

In summary, learning styles are diverse and personal but can be transformed if there are appropriate teaching methods and student practice. There are four types of learning styles, each with merits and demerits. To minimize the demerits of each style, students should apply the appropriate style in an appropriate learning context. Since the context itself is varied, learners need to experience all four styles to be well-rounded learners. The question lies in suitable tools that can help learners transform all four learning styles. The literature review highlighted Project-based learning as an effective way to achieve this desire.

Project-based learning and students' learning styles

Project-based learning (PBL) has been part of the educational practice since approximately the beginning of the 1980s, and the communicative approach greatly influenced it. Nowadays, as an appropriate and effective method, it is widely used in the teaching of English as a second language. Katz and Chard (2000) and Kraus (2009) confirmed that project work encourages creativity, critical thinking, collaboration, self-study, and other study skills. PBL is a very effective approach that allows the students to throw out opinions about the topics covering fields of interest, to ask questions, to estimate, to develop theories, to use different tools, to use the skills acquired in the context of real and meaningful life and allows learners to solve problems and answer questions in a creative way in the classroom and outside.

Thomas and Mergendoller (2000) adopt five criteria of PBL: 1) “Projects are central, not peripheral to the curriculum”; 2) “Projects are focused on questions or problems that ‘drive’ students to encounter (and struggle with) the central concepts and principals of the discipline”; 3) “Projects involve students in a constructive investigation”; 4) “Projects are student-driven to some significant degree”; and 5) “Projects are realistic, not school-like”. Collaboration, as a matter of fact, should also be included as a sixth criterion of PBL. Stoller (2006) defines PBL as 1) having a process and product; 2) giving students (partial) ownership of the project; 3) extending over a period of time (several days, weeks, or months); 4) integrating skills; 5) developing students' understanding of a topic through the integration of language and content; 6) collaborating with other students and working on their own; 7) holding students responsible for their own learning through the gathering, processing, and reporting of information from target language resources; 8) assigning new roles and responsibilities to students and teacher; 9) providing a tangible final product; and 10) reflecting on both the process and the product. Thus, PBL is different from traditional English teaching; it lays great emphasis on the communicative and functional aspects of language learning and pays attention to the integrity of language and content learning.

It is obvious from the definitions that PBL exerts great positive and beneficial effects on the students' academic achievements, namely language skills, critical thinking, and knowledge acquisition. It also affirms that students are the main subjects of any project, and their academic achievements are influenced by PBL; in other words, their learning styles to achieve academic levels are also influenced by PBL.

Researchers not only confirmed that PBL can help develop students' learning styles, but they also found the links between PBL and the four learning styles mentioned by Honey and Mumford (1992). Chen (2004) believed the appropriateness and effectiveness of PBL vary for different kinds of students. He also concluded that PBL is a more effective means of adapting to students' various learning styles or "multiple intelligence" than the traditional instructional model. According to Gomez (2001), PBL is a combination of knowledge and ability to learn (Theorist), knowledge and ability to apply (Pragmatist), and problem-solving skills (Activist). Kubilinskiene (2020) also found that PBL is a model that organizes learning around projects. Projects are complex tasks based on challenging questions or problems that involve students in design, problem-solving, decision-making, or investigative activities (Activist); they give students the opportunity to work relatively autonomously over extended periods of time (Theorist), and culminate in realistic products or presentations (Pragmatist). Markham (2009) shows that a large part of PBL is reflection. Students are required to reflect on their work, offering options that meet student interests and needs, and that will help them to build confidence in a comfortable space for learning (Reflectors). All in all, by using the PBL method, learners have the chance to experience all four learning styles. Below is a detailed table of contents of the steps of PBL (Buck Institute for Education (2018) and the adapted, corresponding learning style for each step

Table 1. Project-based learning process (Buck Institute for Education, 2018)

Step	Contents	Learning styles
1	<i>Making direct questions on their own</i> Making questions on their own helps students create excitement and challenge for themselves, and at the same time helps them self-direct tasks and goals. Good directional questions stimulate their own curiosity and thinking, assume their role in society, or lead to the creativity.	<i>Activist</i>
2	<i>Developing a plan for the project</i> Plan the resources needed for the project (knowledge, skills, equipment, etc.), the sources for general knowledge related to the project before proceeding with the project (experts, speakers, researchers, engineers with in-depth knowledge, etc.) and invite experts to share their knowledge about tourist psychology, history of the country, etc.	<i>Reflector</i>
3	<i>Making a timetable for each step</i> To ensure the project's progress, a specific timetable for each step must be drawn up based on the directional questions posed in the first step and possibly give new directions for goal achievement.	<i>Theorist</i>
4	<i>Self-controlling the project's implementation and products</i> Do the tasks as scheduled. During the implementation, it is necessary to pay attention to the progress of the project via the reports of the results in each phase. In addition, it is important to develop a framework for evaluating individuals in the group and a project evaluation framework for good control.	<i>Pragmatist</i>

5	<i>Self-assessing the results of the project</i> Self-assess the entire project using the criteria table provided by the teacher	<i>Reflector</i>
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All the studies help the researchers have an overview of current findings about learning styles and recognized models, as well as the characteristics of PBL and its values in transforming various learning styles amongst learners. More research should be done to apply those valuable theories to specific contexts for focused participants.

Methods

Setting and Participants

The research context is the English learning environment for tourism students at the Faculty of Tourism – Hanoi Open University from June 1 to August 30, 2022. This is summer time, so students have time to reflect on their learning process and take part in extracurricular activities to enhance their English competence. The Faculty of Tourism - Hanoi Open University is one of the top 5 institutions in Vietnam for tourism human resources training (<https://hou.edu.vn/tin-tuc/951/gioi-thieu-nganh-quan-tri-dich-vu-du-lich-va-lu-hanh.html>) with its focus on English as the key language for teaching and learning of English Courses for Tourism (ESP) and most courses of academic specialization (EMI) to meet the demand of one of the Program Learning Outcomes of the Faculty (PLOs) (<http://hou.edu.vn/1110/nam-2023-van-ban-ve-cong-tac-dao-tao.html>). The Program Learning Outcome requires tourism students to: "Apply English in professional work in the field of tourism and travel, in the study, research, cooperation and integration." To achieve this, students need to achieve a high level of academic achievement. However, as a matter of fact, there are a number of English low-proficiency students who do not have appropriate learning styles to adapt to the requirements of the training program in the Faculty. Therefore, the authors think that research on the typical and suitable learning styles of tourism students is necessary, and solutions to improve that learning style are also important.

To understand the typical learning styles of students in the Faculty of Tourism, the authors call for the 205 participants, who are all third-year students from pre-intermediate to intermediate levels. They have just finished their English for Tourism Program of two majors, Hotel Management and Tourism & Travel services management. These students are divided into 3 levels of academic achievements based on their test results over the previous year; they are Excellent, Good, and Average level. The authors assume that Excellent students may possess the most typical and suitable learning style of all, as they may have their own style for absorbing, processing, and storing new information and mastering new skills (Reid, 1995). Therefore, the results of their learning styles can be useful for the findings. The questionnaire, adapted from the Honey and Mumford Questionnaire (2000), was handed out to 205 students, but only 191/205 (93,2%) students replied. Therefore, the authors analyzed 191 students (63 students of Excellent level, 69 students of Good level, and 59 students of Average level).

Design of the Study

As mentioned in the Literature Review, the questionnaire of Honey and Mumford (2000) is used to identify the typical learning style of tourism students as it is the most common one to help identify learning styles of students, and it is developed from the widely-known "Experiential Learning" model (Kolb & Fry, 1975). This questionnaire has 80 statements, each about one of the four learning styles: Activist, Reflector, Theorist, and Pragmatist. There are 20 statements for each learning style, and all the statements are mixed but not in order of learning style. Here is the questionnaire:

Table 2. Honey and Mumford Learning Style Questionnaire (2000)

1. I have strong beliefs about what is right and wrong, good and bad.	28. I am careful not to jump to conclusions too quickly	55. If I have a report to write, I tend to produce lots of drafts before settling on the final version
2. I often act without considering the possible consequences	29. I prefer to have as many resources of information as possible - the more data to think over, the better	56. I am keen to try things out to see if they work in practice
3. I tend to solve problems using a step-by-step approach	30. Flippant people who don't take things seriously enough usually irritate me	57. I am keen to reach answers via a logical approach
4. I believe that formal procedures and policies restrict people	31. I listen to other people's points of view before putting my own forward	58. I enjoy being the one who talks a lot
5. I have a reputation for saying what I think, simply and directly	32. I tend to be open about how I'm feeling	59. In discussions, I often find I am the realist, keeping people to the point and avoiding wild speculations
6. I often find that actions based on feelings are as sound as those based on careful thought and analysis	33. In discussions I enjoy watching the manoeuvrings of the other participants	60. I like to ponder many alternatives before making up my mind
7. I like the sort of work where I have time for thorough preparation and implementation	34. I prefer to respond to events on a spontaneous, flexible basis rather than plan things out in advance	61. In discussions with people I often find I am the most dispassionate and objective
8. I regularly question people about their basic assumptions	35. I tend to be attracted to techniques such as network analysis, flow charts, branching programs, contingency planning, etc.	62. In discussions I'm more likely to adopt a "low profile" than to take the lead and do most of the talking
9. What matters most is whether something works in practice	36. It worries me if I have to rush out a piece of work to meet a tight deadline	63. I like to be able to relate current actions to a longer-term bigger picture
10. I actively seek out new experiences	37. I tend to judge people's ideas on their practical merits	64. When things go wrong I am happy to shrug it off and "put it down to experience"
11. When I hear about a new idea or approach I immediately start working out how to apply it in practice	38. Quiet, thoughtful people tend to make me feel uneasy	65. I tend to reject wild, spontaneous ideas as being impractical

12. I am keen on self discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc.	39. I often get irritated by people who want to rush things	66. It's best to think carefully before taking action
13. I take pride in doing a thorough job	40. It is more important to enjoy the present moment than to think about the past or future	67. On balance I do the listening rather than the talking
14. I get on best with logical, analytical people and less well with spontaneous, "irrational"	41. I think that decisions based on a thorough analysis of all the information are sounder than those based on intuition	68. I tend to be tough on people who find it difficult to adopt a logical approach
15. I take care over the interpretation of data available to me and avoid jumping to conclusions	42. I tend to be a perfectionist	69. Most times I believe the end justifies the means
16. I like to reach a decision carefully after weighing up many alternatives	43. In discussions I usually produce lots of spontaneous ideas	70. I don't mind hurting people's feelings so long as the job gets done
17. I'm attracted more to novel, unusual ideas than to practical ones	44. In meetings I put forward practical realistic ideas	71. I find the formality of having specific objectives and plans stifling
18. I don't like disorganised things and prefer to fit things into a coherent pattern	45. More often than not, rules are there to be broken	72. I'm usually one of the people who puts life into a party
19. I accept and stick to laid down procedures and policies so long as I regard them as an efficient way of getting the job done	46. I prefer to stand back from a situation	73. I do whatever is expedient to get the job done
20. I like to relate my actions to a general principle	47. I can often see inconsistencies and weaknesses in other people's arguments	74. I quickly get bored with methodical, detailed work
21. In discussions I like to get straight to the point	48. On balance I talk more than I listen	75. I am keen on exploring the basic assumptions, principles and theories underpinning things and events
22. I tend to have distant, rather formal relationships with people at work	49. I can often see better, more practical ways to get things done	76. I'm always interested to find out what people think
23. I thrive on the challenge of tackling something new and different	50. I think written reports should be short and to the point	77. I like meetings to be run on methodical lines, sticking to laid down agenda, etc.
24. I enjoy fun-loving, spontaneous people	51. I believe that rational, logical thinking should win the day	78. I steer clear of subjective or ambiguous topics
25. I pay meticulous attention to detail before coming to a conclusion	52. I tend to discuss specific things with people rather than engaging in social discussion	79. I enjoy the drama and excitement of a crisis situation
26. I find it difficult to produce ideas on impulse	53. I like people who approach things realistically rather than theoretically	80. People often find me insensitive to their feelings
27. I believe in coming to the point immediately	54. In discussions I get impatient with irrelevancies and digressions	

The questionnaire is scored by awarding one point for each ticked item. There are no points for crossed items. After students ticked the statements, the learning style can be identified easily by looking at the table below:

Table 3. Honey and Mumford Learning Style Questionnaire (2000)

2	7	1	5
4	13	3	9
6	15	8	11
10	16	12	19
17	25	14	21
23	28	18	27
24	29	20	35
32	31	22	37
34	33	26	44
38	36	30	49
40	39	42	50
43	41	47	53
45	46	51	54
48	52	57	56
58	55	61	59
64	60	63	65
71	62	68	69
72	66	75	70
74	67	77	73
79	76	78	80
Activist	Reflector	Theorist	Pragmatist

Data collection & analysis

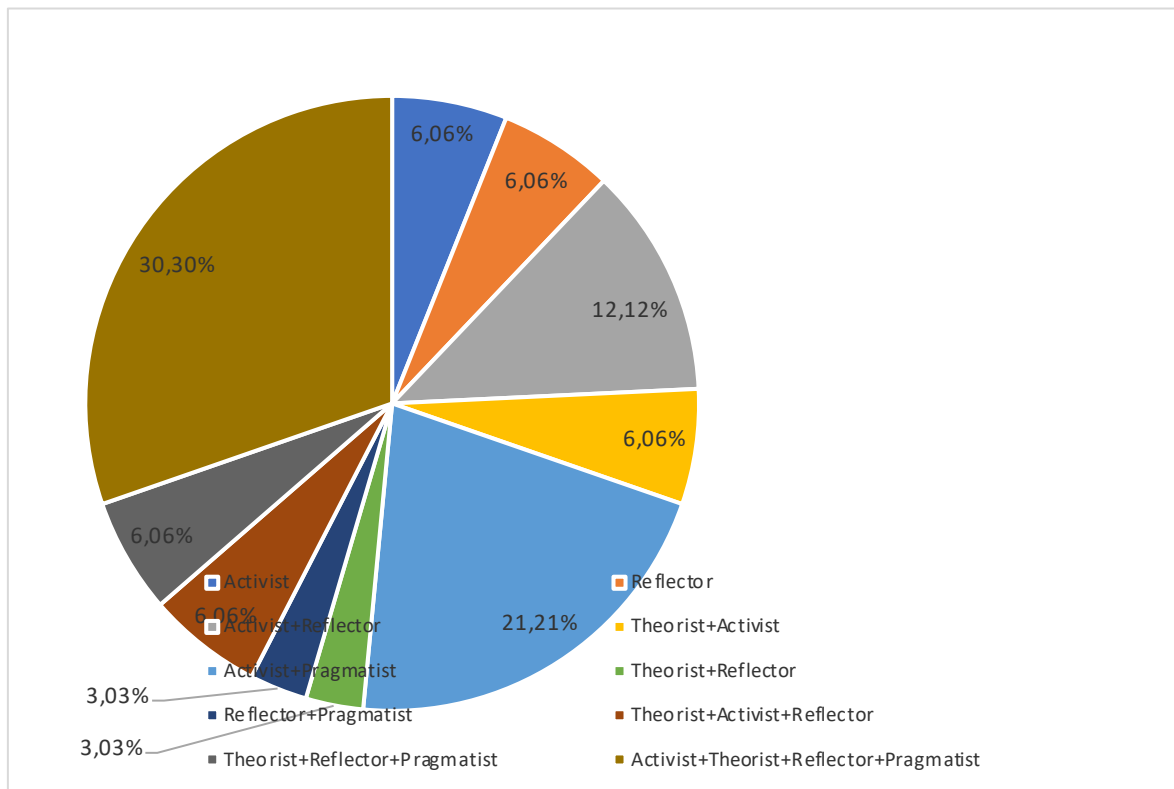
The survey method was used to collect data and classify the learning styles of students at the Faculty of Tourism – Hanoi Open University, which involves questions about the situation of learning English and the student's learning styles. The survey was sent online using Google Forms. After the survey was done, the authors used the descriptive statistics method to analyze the data of all the students to identify the typical learning style.

After identifying the typical learning style, the authors applied a Project to help improve that style. After the project finished, the authors used the comparing-and-contrasting method to prove the effectiveness of the project in improving the typical learning style of tourism students.

Results/Findings and Discussion

The authors derived the following results from the student survey, based on an adaptation of *The Learning Styles Questionnaire* by Honey and Mumford (2000). Firstly, the learning styles of students at Excellent level.

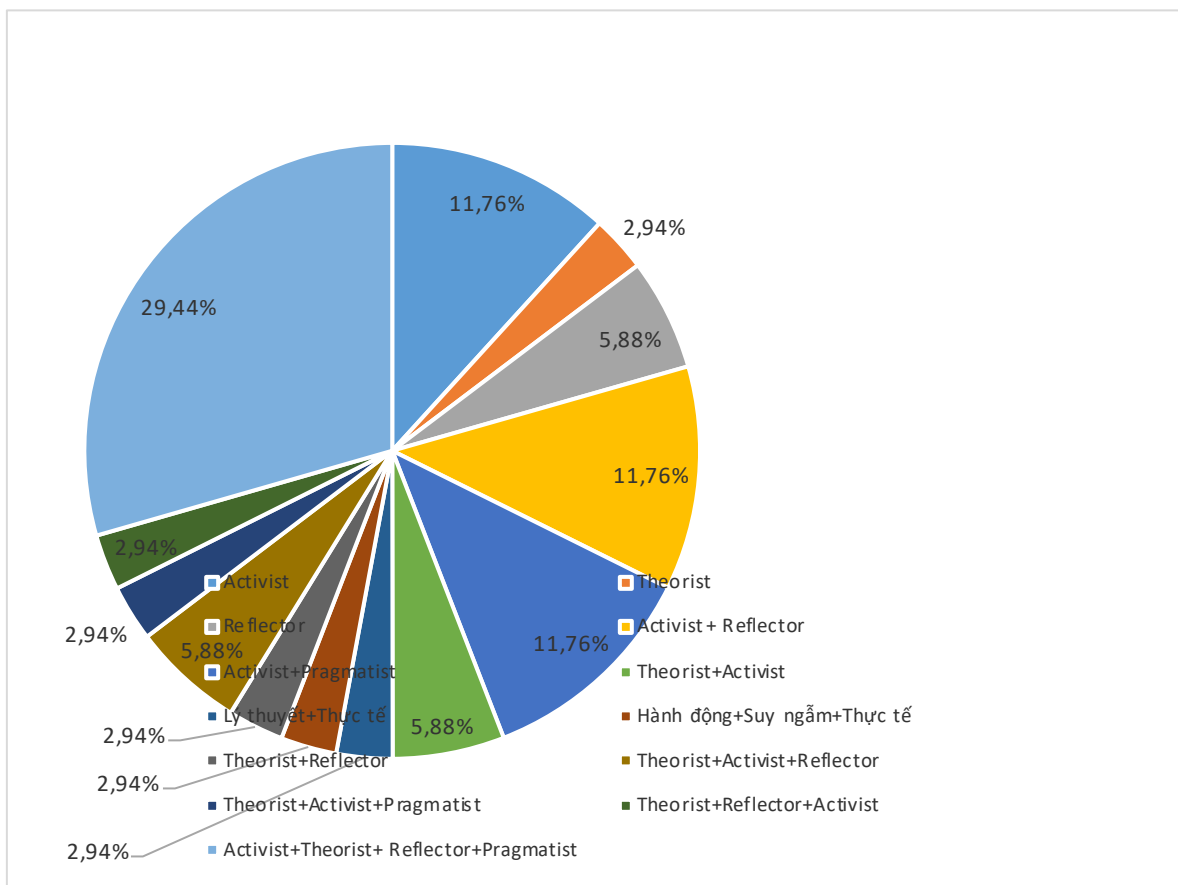
Chart 2. Learning Style of students at Excellent level



According to statistics from chart 2, the research team found that the group of students with Excellent academic performance has a diversity of learning methods. As can be seen, the combination of all four teaching methods accounts for the highest proportion of 30.30% of the total number of students, far surpassing the remaining styles. Activists rank the second most popular style with 21.21%, which can be easily explained by the practical approach of teaching-learning in the Faculty of Tourism. The combination of activist and one or two other styles make up around 6% - 12%. In summary, by analyzing the chart above, we can see the highlights of the group of students with excellent academic performance, which is the harmony of all four learning styles.

Analysis of learning styles of Good level students shows similar results:

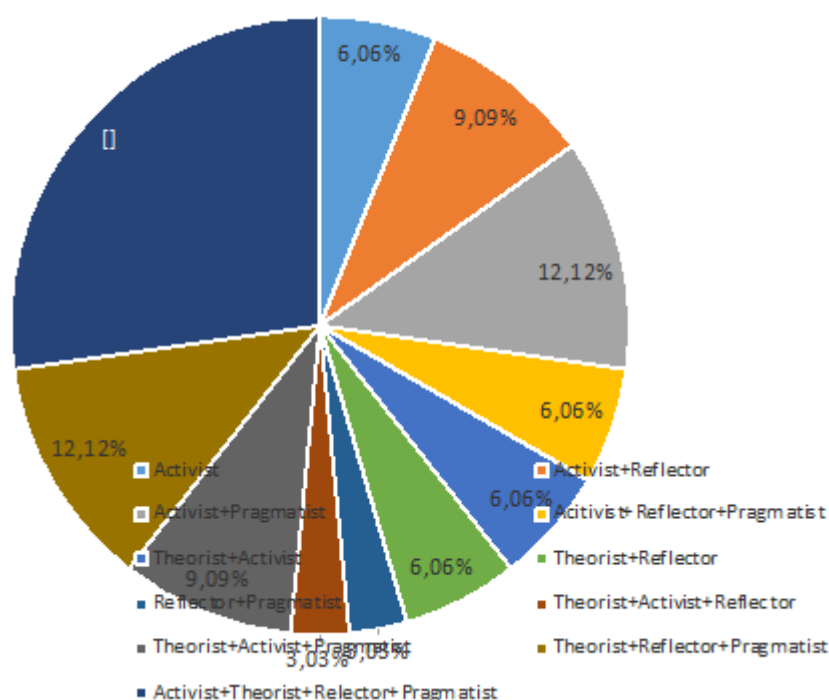
Chart 3. Learning Style of students at Good level



As can be seen from chart 3, the learning styles of tourism students at good academic levels are various, but the most common was the combination of two to four learning styles. The combination of 4 styles is the most popular, with roughly 30%, and that of two styles secure at around 11.76%. Of the two styles, a combination of activists with other styles is more popular than theorists with other styles (11.76% as opposed to 2.94%). It means that activist is the preferred and suitable style for many tourism students, and it will be more effective if it is incorporated with the other 3 styles. From all the analyzed data, it can be concluded that the combination of 4 learning styles was dominant and that there should be strategies to help students apply all 4 styles smoothly.

The result of the Learning styles of students at the Average level show signs of similarities:

Chart 4. Learning Style of students at Average level



From chart 4, we can see that students with average academic performance are similar to the two excellent and good groups in that they can have one, two, three, or even four learning methods combined together, which accounts for the largest proportion of 27.28%. In addition, the chart also shows that the majority of students with average academic performance have the theoretical method in their preferred style. This is understandable because, according to the survey, these students tend to think rationally and answer in a logical way. Therefore, this can also lead to sometimes needing a thorough and in-depth exploration of the problem to be more open to their own thinking. In this group of students, there are also people who have reflective behavior. They are very careful when giving their answers, spending a lot of time considering the problem from many aspects before giving their opinions. However, this causes them to be under time pressure, and they will be very nervous when doing work whose deadline is about to expire. It can be seen that time pressure can prevent them from completing the assigned work well.

From the given chart, the integration of 4 styles is once again proved the most popular style. The only issue here is how to help learners increase this style so that they can reach the level of good and excellent academic levels soon.

All the data given can help the researchers to answer the research questions:

The typical learning style for tourism students at the Faculty of Tourism – Hanoi Open University.

From all the theory and data analysis above, it can be concluded that the most effective learning style for tourism students at Hanoi Open University is the combination of the 4

learning styles: activist, reflector, theorist, and pragmatist. Of the four learning styles, activist is the most dominant. Thus, for learning styles to be highly effective, the research team proposes that the most effective teaching method is transformation, combining all four learning styles together (activist + reflector + theorist + pragmatist). Therefore, we need a suitable and highly applicable method for all types of students to easily perform that combination.

The effectiveness of the project: “The Feeling of Tourists on their Visits to Vietnam” in improving the learning styles of tourism students at Faculty of Tourism – Hanoi Open University.

As mentioned above, project-based learning can help transform learning styles. Here are some illustrations of a City-tour project that help students of tourism combine and transform the 4 learning styles.

-Project title: “The Feeling of Tourists on their Visits to Vietnam”

- Project objectives: to improve the learning style of tourism students and to help each student transform the 4 learning styles.

- Project participants: The selected subjects were 20 students of Good levels in the 3rd year. They are students who took part in the Learning Style survey and would like to improve their existing learning style to improve their study results when they come to learn Specialized subjects. The reason why these students were chosen was that they were still not proficient in their learning style, and the exam results were not up to their expectations. Therefore, they needed guidelines to apply suitable learning styles in particular classroom lessons to upgrade their academic level. The duration was 3 months, from June 1 to August 30, 2022. That was the summer time, and there were no English classes at school. Therefore, the Project result can be reliable.

- Project stages: To transform learning styles, students need to experience a series of well-designed and repeated activities. They need to go through 4 stages of the project, including designing a list of questions to ask tourists about their feelings when visiting Vietnam on the topics chosen by students like Cuisine, Tourist Attractions, Accommodation, Food and Beverage services... Then, they interview tourists at tourist destinations and synthesize them into reports and presentations for evaluation. They need to take part in 15 training sessions, 4 hours/ each session on the project process, focusing on suggested activities that learners should take to apply each step of the project. There will be 03 outings trips to interview Foreign tourists on their visit to Vietnam, observed by lecturers, and 03 reports in the class after the interview. At the end of the project, all the students are interviewed, and the test results of the next semester are analyzed to justify the effectiveness of the project.

- Project schedule:

Table 4. Schedule of the Project: The Feelings of foreign tourists on their visit to Vietnam."

Schedule	Task	Objectives/ Activities	Learning style
Day 1	Orientation meeting	The teacher informs the goal of the project: + to improve the learning style of each student + to help each student successfully transform 4 learning styles -Divide students into 5 groups; each group has 4 students. Each group was interviewed 3 times. Ten guests at a time.	Activist
Day 2	Guidelines on designing questionnaire	-Students design questionnaires under the guidelines of the teacher	Reflector Theorist
Day 3	-Correction of questionnaires -Guest in Tourism Psychology to prepare for the interview	- The teacher evaluates the questionnaire, and students cross-check it to learn from their group's questionnaire. - To prepare for the interview, a tourist psychology expert was invited to give advice when approaching tourists of different cultures, such as choosing people who are similar to tourists, choosing popular tourist destinations, not asking for too personal information, asking What (What kind of accommodation do you stay in VN?) before asking How (How do you feel about your accommodation?), psychology of European, Asian, African, America ...	Reflector
Day 4	Interview 1	-Students choose their own location and interview 10 guests from 10 different groups. -Objectives: Students begin to feel confident when interacting with guests.	Pragmatist
Day 5	Interview Report 1	-Students discuss in groups before the report interview	Activist
Day 6	Interview 2	-Students interview the next 10 guests from 10 different groups -Objective: to help students feel confident interacting with guests	Pragmatist
Day 7	Interview report 2	-Students discuss in groups and report based on the lessons learned from the first interview and the results obtained from the second interview.	Activist
Day 8	Interview 3	- Students interview the next 10 guests from 10 different groups -Goal: Students understand customer psychology and are completely proactive.	Pragmatist
Day 9,10	Instruction to describe graphs	-Teachers guide students to use technology to do their own research on how to synthesize information, turn information into tables, and draw graphs based on aggregated information	Activist
Day 11	Instruction on how to write an academic report	Students follow the guidelines and practice	Activist
Day 12	Consulting on report writing	-Teachers meet with each student to answer questions related to report writing: commonly used	Theorist

		structures, common errors, how to write results, and discuss	
Day 15	Project presentation	-Teachers create an evaluation criteria (Rubrics)	Reflector Pragmatist

-Project result: The test result of the specialized subject after the project shows an increase from 0.3 – 1.0 points, and the interview result proves that the project did.

Table 5. Test results before and after taking the Project

<i>Student</i>	<i>Before Project</i>	<i>After Project</i>
1	6.2	7.0
2	7.8	8.5
3	5.0	7.0
4	4.0	5.0
5	7.5	8.5
6	8.2	8.7
7	5.0	6.0
8	8.5	9.6
9	6.8	7.5
10	5.3	5.5
11	9.0	9.7
12	7.2	8.5
13	5.6	6.0
14	7.5	8.0
15	6.5	7.5
16	8.0	9.0
17	6.5	7.6
18	8.0	7.0
19	5.7	6.0
20	7.0	8.0

Table 6. Feedback from students after taking the project

<i>"I like the expert talk because I am equipped with knowledge about psychology and culture, so contact becomes easy. Some interviews turned into intimate conversations lasting up to 30-45 minutes."</i>	<i>"I almost didn't have to memorize anything before taking the exam like before because I did it myself so I could remember the content."</i>
<i>"After being instructed to use Google Scholar to find academic articles, I wrote more coherently. Complex structures become easier, and I can apply them in my writing."</i>	<i>"When we ask customers, they also ask us. They asked about Vietnamese customs, cuisine, and culture. Fortunately, we learned in class, so we felt confident when answering. When I took the final exam, I almost didn't have to study anything and still got a high score."</i>

<p>- "In the first interview, I didn't dare to approach the guests proactively, but the second and third times, I knew what to do to attract their attention, which was to smile and say hello politely. I found it difficult to remember the communication structures in class, but after talking to guests, I no longer forgot them."</p>	<p>"Before the Project, I mainly participate in group discussions or role-play, but still shy to talk to foreign visitors. During the project, I practiced the interview in class and listened to the expert talking about Cultural differences; I am more confident to interview visitors from many cultures now."</p>
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Source: Project portfolios - Faculty of Tourism – Hanoi Open University

Conclusion

Identifying the typical learning styles is significant to tourism students so that they can see their strengths and weaknesses and, thereby, choose appropriate learning methods to promote their strengths and improve their weaknesses. Through a survey done on a group of specialized students of the same academic performance, we discovered that the typical learning style is the combination of 4 styles: Activist, Theorist, Pragmatist, and Reflector. Suggestions to combine and transform the four learning styles are given based on the theory of Project-based learning theory and the experiences of authors when observing students' performance during the course of study. We recommend further large-scale studies on learning styles in order to explore this research topic more thoroughly.

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Biodata

Ms. Pham Dieu Ly is a main lecturer and the Head of English Department, Faculty of Tourism, Hanoi Open University. Her work involves managing an ESP curriculum and teaching specialized English for tourism. Moreover, she participated in training courses for tourism employees and some international cooperation programs as a trainer and a moderator. Her research interests include teaching methodology and ESP, especially English for tourism and hospitality.

Ms. Nguyen Thi Thao is a main lecturer at Faculty of Tourism, Hanoi Open University. Her work involves teaching professional and specialized English for tourism and hospitality. Moreover, she participated in training courses for tourism employees and some international cooperation programs. Her research interests include teaching methodology and ESP, especially English for tourism and hospitality.

Ms. Phan Thi Phuong Mai is a main lecturer and the Ex-vice Dean at Faculty of Tourism, Hanoi Open University. Her teaching and management experience helps her become a competent researcher in Applied Linguistics. Her research interests include teaching methodology and curriculum development, especially in the fields of tourism and hospitality.