 DOI: 10.31276/VMOSTJOSSH.2024.0051

The current practices of utilising forms, methods, and assessment strategies for self-study learning activities among students at Can Tho University

Thi Kieu My Doan[1*], Thi Tham Tran[2], Doan Trinh Nguyen[2]

[1]School of Education, Can Tho University, Campus II, 3/2 Street, Xuan Khanh Ward, Ninh Kieu District, Can Tho City, Vietnam
[2]College of Engineering, Can Tho University, Campus II, 3/2 Street, Xuan Khanh Ward, Ninh Kieu District, Can Tho City, Vietnam

Received 17 July 2024; revised 24 September 2024; accepted 29 October 2024

Abstract:

Self-study is a crucial component of higher education, playing a significant role in enhancing students' academic success and lifelong learning abilities. This study examines the current practices of self-study at Can Tho University, focusing on forms, methods, and assessment strategies. A mixed-methods approach was adopted, involving 919 participants, including administrators, lecturers, and students. Quantitative data were analysed using SPSS, while qualitative insights were extracted through thematic coding. The findings reveal that self-study with direct guidance from lecturers is considered the most effective, emphasising the critical role of timely instructor support in improving learning outcomes. Interactive methods, such as group discussions and online exploration, were highly rated by students, while autonomous methods like mind mapping posed challenges due to insufficient self-management skills. Differences in perceptions between students and lecturers regarding the effectiveness of self-study methods and assessment strategies were also noted, particularly in the preference for flexible forms and prompt feedback. These results highlight the need for enhanced guidance, improved assessment systems, and tailored support tools to foster effective self-study habits. This study provides valuable insights into optimising self-study practices and improving the quality of higher education in Vietnam.

Keywords: **evaluation and assessment, form, method, self-study, students.**

Classification numbers: **3.1, 3.2**

1. Introduction

Self-study is a crucial component of higher education, significantly influencing students' academic performance and lifelong learning abilities [1]. Diverse self-study methods and effective assessment techniques play a key role in developing students' independent learning skills [2]. However, many universities face challenges in implementing effective self-study methods, leading to inconsistent academic outcomes [3, 4]. Understanding the specific challenges and successes at Can Tho University is essential for developing appropriate measures to enhance educational quality and student autonomy.

[*]Corresponding author: Email: dtkmy@ctu.edu.vn

In previous studies on self-study, most of the studies focused on developed countries, where cultural factors, educational policies and available resources are very different from those in Vietnam [1, 2]. This study aims to fill this gap by exploring the forms and methods of self-study at Can Tho University, a unique educational environment, thereby contributing to improving the quality of higher education in the Vietnamese context.

This study conducted a comprehensive survey involving administrators, lecturers, and students, aiming to provide a detailed analysis of the current situation and the impact of self-study activities on students' academic performance. These findings will offer valuable insights to improve self-study activities and contribute to the broader discourse on fostering self-directed learning in higher education.

2. Literature review

2.1. Forms of self-study

Self-study is a crucial aspect of the educational process, helping students develop autonomy, critical thinking, and problem-solving skills. The forms of self-study can be classified into three main types: self-study with instructor guidance, self-study with remote instructor guidance, and self-study without instructor guidance [5].

Self-study with instructor guidance: This form involves students receiving direct support from lecturers or academic advisors and usually takes place in traditional classrooms or small group discussions. The guidance from instructors helps students grasp knowledge, clarify doubts, and receive timely feedback [2].

Self-study with remote instructor guidance: In this form, students receive support from instructors through various media such as email, video calls, or online learning platforms. If implemented correctly, self-study with remote instructor guidance can be as effective as traditional learning. The flexibility in time and space is a significant advantage of this form, allowing students to be more proactive in managing their time and study plans [6]. However, this form requires students to have strong self-management and discipline skills.

Self-study without instructor guidance: In this form, students are entirely responsible for their learning process without direct support from instructors. They must find resources, plan their study schedules, and self-assess their learning outcomes. According to D.P. Lan (2021) [7], self-study without instructor guidance helps students develop autonomy, self-management, and lifelong learning skills. However, this form also presents many challenges, particularly for students who lack experience or self-management skills.

Each form of self-study has its own advantages and challenges. A flexible combination of these forms can create an effective learning environment suited to different student groups [8]. The choice of an appropriate self-study form depends not only on the nature of the subject but also on the individual characteristics and actual conditions of the students.

2.2. Self-study methods

Self-study methods are a key element in higher education, helping students develop autonomy, critical thinking, and problem-solving skills [9]. Self-study is not limited to reading books or completing assignments but also includes searching for information, analysing data, and applying knowledge in practice [10]. Self-directed learners need to evaluate information from various sources, make judgments based on evidence and logical reasoning, and be ready to adjust their viewpoints when new evidence emerges [11].

Self-study methods are crucial in helping students develop autonomy, critical thinking, and problem-solving skills [12]. Self-study not only enables students to master knowledge but also to cultivate essential skills for academic and life success. Combining self-assessment with support from lecturers creates a comprehensive and effective learning system.

2.3. Evaluation and assessment of students' self-study activities

The evaluation and assessment of students' self-study activities are crucial in higher education, helping to determine the effectiveness of learning methods and ensuring that students develop the necessary self-study skills for academic and career success [13, 14]. This evaluation encompasses two main aspects: self-assessment by students and assessment by lecturers.

Self-assessment: Self-assessment involves students' self-awareness, self-analysis, and self-judgment about their learning processes [15]. This is an indispensable part of developing self-study skills, allowing students to adjust and improve their learning methods.

Lecturer assessment: Lecturer assessment involves instructors using various methods and tools to evaluate students' self-study activities. This process ensures that students achieve their learning objectives and develop self-study skills. According to Y. Kainarbayev, et al. (2024) [15]'s research, the assessment of students' self-study activities must ensure transparency, fairness, and a close connection to learning objectives. This allows lecturers not only to evaluate students' progress but also to identify areas for improvement in teaching methods and student support [14].

The evaluation and assessment of students' self-study activities are complex but necessary processes to ensure students' development in the right direction. Self-assessment helps students become aware of and improve their learning methods, while lecturer assessment ensures that students achieve their learning objectives and develop self-study skills. The combination of self-assessment and lecturer assessment creates a comprehensive and effective evaluation system.

Although previous studies have discussed various self-study methods, few have evaluated the differences in perceptions between lecturers and students regarding these methods. This gap leads to the formation of the key research questions for this study, which include:

Question 1: *Which forms, methods, and assessment strategies for self-directed learning are perceived as most effective by students and lecturers at Can Tho University?*

Question 2: *Are there significant differences between the perceptions of students and lecturers regarding the effectiveness of self-study methods?*

Question 3: *How can the effectiveness of self-study methods be improved in the context of higher education at Can Tho University?*

3. Research methodology

The study surveyed administrators, lecturers, and students from 10 training units and 5 functional departments related to self-study activities. After the survey period, a total of 919 responses were collected, including 39 from administrators at various schools, faculty, and department levels, 73 from lecturers, and 807 from students. Specific information about the research subjects is shown in Tables 1-4.

Table 1. Number of survey respondents at Can Tho University units.

No.	Unit surveyed	Management and lecturers	%	Students	%
1	College of Engineering	15	13.4	185	22.9
2	College of Information and Communication Technology	15	13.4	78	9.7
3	College of Aquaculture & Fisheries	10	8.9	48	5.9
4	College of Natural Sciences	6	5.4	70	8.7
5	College of Environment & Natural Resources	13	11.6	59	7.3
6	College of Agriculture	9	8.0	114	14.1
7	School of Social Sciences and Humanities	5	4.5	46	5.7
8	School of Political Science	5	4.5	50	6.2
9	College of Economics	8	7.1	102	12.6
10	College of Education	10	8.9	55	6.8
11	Department of Student Assistance	3	2.7	-	-
12	Department of Academic Affairs	3	2.7	-	-
13	Learning Resource Center	5	4.5	-	-
14	Center for Students Consultance, Assistance and Start-up	2	1.8	-	-
15	Department of Scientific Research Affairs	3	2.7	-	-
Total		**112**	**100.0**	**807**	**100**

Table 2. Statistics on management staff information.

Survey information	Category	Number	Percentage (%)
Gender	Male	24	54.2
	Female	15	45.8
Years of experience in management	Less than 5 years	2	3.4
	5 to 10 years	17	45.8
	Over 10 years	20	50.9
Academic qualification	Master's Degree	18	46.2
	Doctoral Degree	14	35.9
	Associate Professor	7	17.9

Table 3. Statistics on lecturer information.

Survey information	Category	Number	Percentage (%)
Gender	Male	46	63
	Female	27	37
Years of teaching experience	Less than 5 years	7	11.3
	5 to 10 years	19	26.4
	Over 10 years	47	62.3
Academic qualification	Master's degree	43	58.9
	Doctoral degree	25	34.2
	Associate Professor	5	6.9

Table 4. Statistics on student information.

Survey information	Category	Number	Percentage (%)
Gender	Male	438	54.3
	Female	369	45.7
Student year	1st Year	206	25.6
	2nd Year	280	34.7
	3rd Year	167	20.7
	4th Year	143	17.7
	5th Year	11	1.4
Accumulated results	Excellent	82	10.8
	Very good	276	35.5
	Good	355	40.0
	Average	94	14.3

This study employs a mixed-methods approach, incorporating both quantitative and qualitative methods to gain a comprehensive understanding of self-study practices at Can Tho University. This research design leverages the strengths of both approaches, allowing for the collection of broad quantitative data from a large number of participants, while also delving into personal insights and experiences through open-ended questions.

3.1. Quantitative method

A survey using a 5-point Likert scale was employed to assess factors related to self-study methods, forms, and the effectiveness of self-directed learning activities. The quantitative data provides insights into the prevalence and perceived effectiveness of these methods from the perspectives of different respondent groups, including students, lecturers, and management staff.

3.2. Qualitative method

Open-ended questions were used to gather deeper opinions, perspectives, and feedback from students and lecturers regarding the challenges and opportunities associated with self-study. The qualitative data was analysed using thematic coding to identify key themes related to both the difficulties and successes encountered during the self-study process.

This mixed-methods approach ensures that both the breadth of quantitative data and the depth of qualitative insights are captured, leading to a well-rounded understanding of self-study practices.

A survey using a 5-point Likert scale was utilised to assess the effectiveness as perceived by administrators, lecturers, and students regarding the use of methods, forms, and techniques for evaluating self-study activities at Can Tho University. The scale was defined as follows: 1.00-1.80 = Completely ineffective; 1.81-2.60 = Ineffective; 2.61-3.40 = Average; 3.41-4.20 = Quite effective; 4.21-5.00 = Very effective.

SPSS software version 20.0 was used to encode and process the data, employing calculations of means and standard deviations. The reliability of the Cronbach's alpha coefficient was tested, with a target of 0.8 or higher.

4. Results and discussion

4.1. Current status of self-study forms by students at Can Tho University

The results from Table 5 show that, for self-study forms with direct guidance from lecturers, paying attention to lectures received the highest

Table 5. Evaluation of the use of self-study forms by management staff, lecturers, and students at Can Tho University.

No.	Method	Average score by students	Average score by management staff and lecturers	Overall average	Standard deviation	Rank
	Self-study with direct guidance from the teacher					
1	Paying attention in class	3.89	3.78	3.84	0.749	1
2	Taking notes during lectures	3.93	3.63	3.78	0.764	2
3	Participating in class discussions	3.86	3.63	3.75	0.793	3
	Self-study with remote guidance					
4	Reviewing class notes	3.83	3.59	3.71	0.751	5
5	Completing homework assignments given by the teacher	3.86	3.57	3.72	0.792	4
6	Self-study through scientific research	3.78	3.54	3.66	0.836	6
	Self-study without teacher's guidance					
7	Studying according to personal interest	3.84	3.43	3.64	0.815	7
8	Studying related to academic tasks	3.81	3.38	3.60	0.778	8
	Overall average	**3.79**	**3.54**	**3.71**	**0.784**	

rating with an average score of 3.84 and the lowest standard deviation (0.749), indicating consistency in perception between students and teaching staff. Note-taking during lectures ranked second with an average score of 3.78. This form also shows a relatively low standard deviation (0.764), indicating widespread acceptance. The presence of lecturers and direct interaction creates a supportive learning environment where students receive immediate feedback and explanations. This consistency may stem from students feeling more assured and confident with the lecturers' guidance during their studies.

For self-study forms with remote guidance from lecturers, self-study through lecture notes received an average score of 3.71, indicating that students use this form, but slightly less than those with direct guidance. Self-study of assigned exercises had an average score of 3.72, showing a higher preference compared to self-study of lecture notes. Self-study through scientific research received an average score of 3.66, evaluated as less utilised, possibly due to the high standard deviation (0.836) reflecting diverse opinions from management staff, lecturers, and students.

For self-study forms without lecturer guidance, self-study related to academic tasks received the lowest average score of 3.60 among all forms, falling into the 'average' category according to the Likert scale., with a standard deviation of 0.778, indicating that students pay less attention to this form. The lower average scores indicate that these forms are considered less utilised compared to those with direct guidance from lecturers. The lack of specific guidance and immediate feedback may pose difficulties for students in self-regulating their studies, potentially leading to confusion or loss of motivation. Qualitative research reveals that many students face challenges in time management and organising study materials when there is no direct support from instructors. Some students reported that this method often leads to a loss of motivation and lacks interaction, which makes it difficult to address questions in a timely manner.

The results of the study indicate that lecturers and students have differing evaluations regarding the effectiveness of self-study forms. Students rated self-study with direct guidance from lecturers higher than lecturers did. The reason is because:

- Different expectations: Students may have higher expectations for support and guidance from lecturers to feel confident in their learning. In contrast, lecturers might assume that students are sufficiently equipped with knowledge and skills to learn effectively without continuous guidance.

- Familiarity with the learning environment: Students at Can Tho University are often accustomed to a structured educational model, where lecturer support is essential, leading them to value guided self-study forms more than those without guidance.

The study results show that self-study with direct guidance from lecturers was rated the most effective by both students and lecturers at Can Tho University. This finding is consistent with Babu's conclusion, who indicated that direct support and timely feedback from lecturers help students deepen their understanding of learning content and achieve better learning outcomes in self-directed learning environments [2].

However, this study extends previous findings by revealing that students at Can Tho University are more dependent on direct guidance compared to findings from international studies. For example,

Hauge's research shows that students in developed countries can engage in self-study effectively without much support from lecturers. This reflects the differences in educational culture, where Vietnamese students are more accustomed to structured learning environments with regular guidance from lecturers [1].

To improve the effectiveness of self-study forms without lecturer guidance, Can Tho University should provide additional structural support tools such as detailed guides, reference materials, and online and offline consultation sessions. Courses on self-study skills and time management could also help students develop self-study skills and become more confident when there is no direct guidance from lecturers.

4.2. Current status of assessing self-study methods by students at Can Tho University

The results from Table 6 show that highly interactive self-study methods, such as group discussions and online exploration, were rated highly by students, with average scores of 3.68 and 3.68, respectively, falling into the 'quite effective' category on the Likert scale. These methods displayed strong agreement between students and lecturers, particularly group discussions, which had the lowest standard deviation (0.825). This indicates that group discussions are a widely adopted and highly regarded self-study method for practical learning.

Conversely, the method of mind mapping received the lowest average score (3.45), categorised as 'average,' with the highest standard deviation (0.900). This suggests significant variability in perceptions among respondents, likely due to the fact that mind mapping requires more independent thinking skills, which many students may not yet have fully developed.

Qualitative research provides additional insights into the self-study methods evaluated in Table 6.

Specifically, open-ended interviews reveal that students highly value interactive self-study methods, such as group discussions and online exploration, as these not only help them grasp knowledge but also develop communication and teamwork skills. One student shared:

"Group discussions help me gain a deeper understanding of the subject matter and learn from

Table 6. Evaluation of self-study methods by management staff, lecturers, and students at Can Tho University.

No.	Method	Average score by students	Average score by management staff and lecturers	Overall average	Standard deviation	Rank
1	Self-study through information search	3.66	3.67	3.67	0.829	3
2	Self-study through group discussions	3.65	3.71	3.68	0.825	1
3	Self-study by solving problems	3.60	3.49	3.55	0.795	4
4	Self-study through online exploration	3.60	3.75	3.68	0.847	2
5	Self-study using mind maps	3.67	3.23	3.45	0.900	5
	Overall average	**3.64**	**3.57**	**3.60**	**0.839**	

my peers' perspectives, while online exploration offers a wealth of information from diverse sources."

However, when discussing mind mapping, many students expressed difficulties in organising and structuring information effectively due to a lack of analytical and systematisation skills. Another student explained:

"Mind mapping can be useful, but I struggle to create clear and logical maps on my own. I think I would do better with more guidance or examples from instructors".

Regarding self-study methods, lecturers tend to rate traditional methods higher, while students prefer interactive learning methods, such as group discussions and online searches. The reason originates from:

- Differences in educational perspectives: Lecturers may prioritise methods that have been proven effective in delivering knowledge, while students might feel that these methods do not meet their learning needs. Students could find that interactive methods enhance their engagement and practical application of knowledge.

- Practical experience: Lecturers might evaluate based on their teaching experience and methods they have observed to be effective in the past, whereas students are seeking learning forms that better align with their learning styles, creating a discrepancy in evaluation.

The study reveals that group discussions and online information searches are highly rated by students as effective self-study methods. This aligns with the findings of J. Yang, et al. (2022) [3], who emphasised that interactive learning methods, such as group discussions, help students not only master knowledge but also develop the necessary professional skills during self-study.

Overall, group discussion and online exploration are the most effective self-study methods, highlighting the importance of interaction and access to diverse information. Methods requiring individual effort, such as mind mapping and problem-solving, are less effective, possibly due to a lack of immediate feedback and support. Students need specific guidance on self-study methods to effectively utilise various approaches across different courses and achieve the best self-study outcomes.

4.3. Current status of assessing the extent of using methods to test and evaluate self-study activities by students at Can Tho University

Results depicted in Table 7 illustrate the implementation level of assessment methods in students' self-study activities.

The results from Table 7 show that lecturer assessment methods, such as using various types of tests (average score 3.83) and timely publication of results (average score 3.78), were rated highly, falling into the 'quite effective' category on the Likert scale. This reflects agreement between lecturers and students on the importance of applying flexible assessment forms and providing timely feedback to support students' self-study. Lower average scores (3.55-3.56) related to students' self-assessment methods, such as evaluating self-study goals and content, suggest that students find it more challenging to assess their own learning progress without external guidance.

Qualitative data analysis reveals that students often face difficulties in self-assessing their self-study activities, especially when it comes to determining goals and learning content. Many

Table 7. Evaluation of self-study assessment methods by management staff, lecturers, and students at Can Tho University.

No.	Assessment method	Average score by students	Average score by management staff and lecturers	Overall average	Standard deviation	Rank
	Students' self-assessment of their self-study activities					
1	Assessing self-study goals	3.81	3.30	3.56	0.751	4
2	Assessing self-study content	3.77	3.34	3.56	0.809	5
3	Assessing self-study methods	3.72	3.32	3.52	0.821	8
4	Assessing self-study tools	3.75	3.38	3.56	0.825	6
5	Assessing self-study time and location	3.71	3.34	3.55	0.836	7
6	Assessing self-study formats	3.70	3.36	3.52	0.870	9
	Lecturers' assessment of students' self-study activities					
7	Using various assessment methods: objective tests, essays	3.75	3.91	3.83	0.762	1
8	Using reasoning tests to enhance students' creativity	3.73	3.74	3.74	0.764	3
9	Timely publication of assessment results to encourage students	3.77	3.79	3.78	0.775	2
	Overall average	**3.73**	**3.50**	**3.62**	**0.801**	

students expressed uncertainty about how to effectively evaluate their learning progress due to a lack of clarity in assessment criteria and self-awareness skills.

One student shared: *"I find it difficult to assess whether I have achieved my learning goals. Without guidance from lecturers, sometimes I'm unsure if I'm on the right track".*

In contrast, lecturers highly value the use of diverse testing methods, which is also supported by students. They feel that such tests not only help evaluate knowledge but also provide timely feedback for improving self-study methods. Another student explained: *"The tests help me realise my weaknesses, and the lecturers clearly explain how I can improve".*

These qualitative insights highlight the role of lecturer assessments in helping students gain a clearer understanding of their self-study abilities. They also show that students need further guidance in self-assessment to improve their ability to self-manage and monitor their learning progress independently.

When it comes to assessment methods, students favour flexible assessment forms, while lecturers prefer traditional assessment methods, such as regular exams. The reason can be traced back to:

- Expectations and perceptions: Students often seek flexibility and prompt feedback from assessment forms, while lecturers may view traditional assessment methods as providing more

accuracy and reliability. Students feel that more flexible assessments allow them to demonstrate their knowledge more naturally and easily.

- Pressure in learning: Students may feel pressured when faced with traditional exams, while lecturers may see these exams as a way to ensure that all students meet learning standards. This leads to differences in evaluation approaches and expectations from both parties.

The study found that students highly value transparent and clear assessment tools, which is consistent with the conclusions of Y. Kainarbayev, et al. (2024) [15]'s who emphasised that timely and fair feedback is critical to enhancing students' self-study skills. Specifically, group projects and assignments were rated as effective in evaluating knowledge and promoting self-directed learning skills.

An additional finding from this study is that while lecturers favour traditional assessment methods such as regular tests, students tend to prefer more flexible forms of assessment with prompt feedback. This highlights a difference in perspectives on self-study assessment methods between students and lecturers, and further research is needed to improve the alignment of assessment tools with student needs.

Lecturer evaluations were rated higher than students' self-assessments, indicating that implementing external assessment methods is perceived as more effective. Utilising diverse assessment methods and providing timely feedback are crucial in supporting effective self-study. Therefore, the university should develop solutions to assess and provide feedback on students' self-study activities to enhance self-study effectiveness and educational quality at Can Tho University.

5. Conclusions and recommendations

5.1. Conclusions

This study has clarified the role of forms, methods, and assessment strategies in enhancing the effectiveness of self-directed learning among students at Can Tho University. The results indicate that self-study with direct guidance from lecturers is rated as the most effective, aligning with the previously stated hypotheses regarding the importance of lecturer support in improving learning outcomes. The research confirms that students are highly dependent on guidance from lecturers, reflecting the unique characteristics of the Vietnamese educational context.

Furthermore, the findings demonstrate that students highly value interactive learning methods, such as group discussions and online information searches. This confirms that these learning methods not only help students acquire knowledge but also develop essential professional skills. However, the study also highlights that students face difficulties in unguided self-study, indicating a gap in their self-management skills that needs improvement.

Additionally, the research emphasises the need for clear and transparent assessment tools. The results reveal a discrepancy between students' preference for flexible assessment forms and lecturers' perspectives on traditional assessment methods. This gap warrants further investigation to adjust assessment tools to better align with the actual needs of students.

These findings not only provide valuable insights into the current state of self-directed learning at Can Tho University but also open new avenues for research in developing supportive programs

for student self-study. Recommendations include enhancing the role of lecturers in guidance and feedback, integrating supportive learning tools, and adjusting assessment methods to better meet student needs.

However, this study also has limitations, including the restricted sample size and geographic context, which may affect the generalisability of the results. Future research should consider expanding the sample size and applying the research methodology at other universities to test the consistency of the findings. Future studies should focus on evaluating the effectiveness of these programs and exploring further the differences in perceptions between students and lecturers regarding self-study methods.

This conclusion clearly links the research findings back to the research questions posed, thereby reinforcing the study's contribution to the academic discourse on self-directed learning in higher education in Vietnam.

5.2. Recommendations

The research proposes the following solutions to effectively address the identified issues:

5.2.1. Enhance direct guidance from instructors

The research shows that direct support from instructors significantly enhances the effectiveness of students' self-study. The university should implement the following measures to provide timely support, effectively address students' questions, and ensure learning progress:

- Instructors should allocate more time for direct guidance in class and outside of class through discussions and consultations. Instructors should dedicate at least two sessions per week to direct guidance both during and outside of class hours. Encourage the organisation of discussion sessions and small group exercises, allowing students to ask questions and interact directly with instructors after each class.

- Establish fixed weekly hours for students to ask questions, seek advice, and receive direct guidance. The university should set up a fixed schedule for consultation sessions, with each instructor having at least two hours per week to support students directly or online. Students can register in advance through the university's learning management system.

- Use online tools such as Zoom and Microsoft teams to organise online guidance sessions, making it easier for students to access support.

These activities can create an interactive learning environment and help students gain a deeper understanding of the material. Additionally, they promote student autonomy and responsibility in learning.

5.2.2. Promote interactive learning methods

Group learning methods are evaluated as the most effective in self-study activities. Therefore, Can Tho University should implement several methods to enhance the effectiveness of interactive learning:

- Form study groups among students: Encourage students to form small study groups based on interests and majors to discuss lectures, solve problems, and support each other. The university should direct the Student Affairs Office and Youth Union to oversee this activity.

- Integrate project-based learning into the curriculum: Each course should include at least one major group project. Students are required to form groups of 3-5 members and work together

to complete the project. Instructors should apply effective group learning methods such as peer instruction and jigsaw to achieve better results.

- Organise monthly thematic discussions: Invite experts from the fields taught at Can Tho University to share their experiences and knowledge, creating opportunities for students to exchange and share knowledge and experiences.

These activities will stimulate creative thinking, cooperation, and the development of soft skills among students, enhancing their motivation and engagement in learning.

5.2.3. Improve assessment and feedback methods

Assessment is crucial for students to recognise their strengths and weaknesses during their studies. Instructors play a key role in helping students identify their competencies and adjust their self-study activities through the following measures:

- Diversify assessment methods: Instructors should combine various assessment forms such as multiple-choice tests, essays, presentations, and group projects to comprehensively evaluate students' skills. Develop clear, specific, and appropriate evaluation criteria for each course, and make the scoring rubrics and evaluation criteria available before assessments.

- Provide timely and detailed feedback: Instructors should offer detailed and prompt feedback after each exam and assignment, helping students improve their skills and knowledge. Analyse students' strengths and weaknesses in each test and assignment and suggest suitable learning methods to address weaknesses and enhance strengths.

- Use online tools to automate grading and feedback: Utilise online learning management systems to organise multiple-choice and essay tests. The university should widely implement the LMS software. Instructors can use tools like Turnitin to grade essays and provide detailed feedback. Multiple-choice tests should be graded automatically, with results immediately sent to students.

Enhancing the effectiveness of self-study for students at Can Tho University requires a combination of several factors, from direct guidance from instructors and interactive learning methods to improved assessment and feedback methods. Implementing these measures comprehensively will create an effective and well-rounded learning environment, helping students develop both knowledge and skills.

CRediT author statement

Thi Kieu My Doan: Data collection and Writing; Thi Tham Tran, Doan Trinh Nguyen: Providing research guidance.

COMPETING INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this article.

REFERENCES

[1] K. Hauge (2021), "Self-study research: Challenges and opportunities in teacher education", *Teacher Education in the 21st Century-Emerging Skills for a Changing World*, pp.1-18, DOI: 10.5772/intechopen.96252.

[2] K.M. Babu (2017), "Improving learning outcomes through innovative pedagogy and assessment by introducing self-study component in the course delivery structure", *2017 5th IEEE International Conference on MOOCs, Innovation and Technology in Education (MITE)*, pp.120-124, DOI: 10.1109/MITE.2017.00027.

[3] J. Yang, G.A. Buck, N. Nageotte (2022), "The self-study process of a scientist as she delineated the meaning of scientific inquiry and developed a new professional identity as a science teacher educator", *International Journal of Research in Education and Science,* **8(2)**, pp.408-429, DOI: 10.46328/ijres.2709.

[4] T.L. Phuong (2024), "Self-studying activities in Japanese of students of the faculty of foreign languages - Ha Noi University of Polytechnics: Current situation and proposed solutions", *Vietnam Journal of Education,* **24(6)**, pp.53-58 (in Vietnamese).

[5] P.H. Tu, N.M. Sang, H.M. Trung (2023), "The status of self-study abilities of students at Vinh Long University of Technology Education", *Russian Law Journal*, **11(3)**, pp.2745-2752.

[6] N.D.M. Ha (2017), "Diversification of forms formative assessment at the university level," *Journal of Educational Management Science,* **3(15)**, pp.10-19 (in Vietnamese).

[7] D.P. Lan (2021), "Forms of teaching organization towards enhancing self-study for students", *Vietnam Journal Online,* **23**, pp.122-125 (in Vietnamese).

[8] N.H.M. Hanh (2018), "Pros and cons of some learning progress assessment methods", *Scientific Journal of Van Lang University,* **12**, pp.79-84 (in Vietnamese).

[9] D.L. Tidwell, S.R. Jónsdóttir (2020), "Methods and tools of self-study"*, Handbook of Self-Study of Teaching and Teacher Education Practices*, pp.377-426, DOI: 10.1007/978-981-13-6880-6_12.

[10] O. Murzina (2021), "The educational environment for improving students' self-study: Best European practices", *Laplage em Revista International*, **7**, pp.144-162, DOI: 10.24115/S2446-622020217Extra-E1170p.144-162.

[11] A. Alabdulhadi, M.J.E. Faisal, I. Technologies (2021), "Systematic literature review of STEM self-study related ITSs", *Education and Information Technologies,* **26(2)**, pp.1549-1588, DOI: 10.1007/s10639-020-10315-z.

[12] S.J. Kühl (2019), "Investigating the self-study phase of an inverted biochemistry classroom-collaborative dyadic learning makes the difference", *BMC Medical Education,* **19**, pp.1-14, DOI: 10.1186/s12909-019-1497-y.

[13] T.H.M. Phuong (2019), "Current situation of testing and assessing study results of natural science subjects in secondary schools using the approach of competency in teaching", *Can Tho University Journal of Science*, **55**, pp.74-82, DOI: 10.22144/ctu.jsi.2019.102 (in Vietnamese).

[14] N.T.N. Quyen (2023), "Assessment methods of capacity-based learning outcomes in teaching informatics subjects at Dong Thap University", *Dong Thap University Journal of Science,* **12(01)**, pp.95-104, DOI: 10.52714/dthu.12.7.2023.1136 (in Vietnamese).

[15] Y. Kainarbayev. A. Baikenzheeva, I. Kemeza, et al. (2024), "Didactic conditions for the organization of self-study and self assessment of students in the study of biology", *Journal of Education and Technology,* **7(4)**, pp.436-449, DOI: 10.29062/edu.v7i3.763.