

## Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University



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**ABSTRACT:** Basic informatics is a basic subject, so it is inseparable and compulsory in every college and university today. To learn basic informatics, physical, intellectual, and emotional involvement is required to successfully send and express messages through the manipulation of computer transport. However, persuading students who are not majoring in computer science to use computer science as a subject Students are forced to study in a stressful situation, so they always feel anxious, bored and the results reflect it all. This fact does not exclude the learning environment at Basic Science, Van Lang University.

In this study, our goal is to survey the status of children in computer learning of students at the whole school, Van Lang University through pointing out the difficulties and challenges in research as well as drawing conclusions. resolve these problems. We also suggest some useful references for related researchers, especially aimed at low-level fellows. We randomly selected the participating students from among the students of Van Lang University to complete a questionnaire consisting of 09 questions. The students are selected as freshmen to keep track of the areas studied. The results show that students who have difficulty in learning informatics have low proficiency and because the subject is a compulsory subject, students have to study it, leading to poor academic results. These results suggest that teaching teachers should build a collection of student feedback surveys for their academic work from which teachers come up with good teaching methods. The attitude of the teacher should be friendly so that the students can mingle and continue in an enjoyable class and they will advance just in time (Thu Nguyet Minh Nguyen, 2021).

**KEYWORDS:** Limitations in computer learning of first-year students

### 1. INTRODUCTION

Perhaps it is not necessary to mention too much about the influence and value of informatics in society in the 4.0 era. Learning computer science is like holding a trump card with which you believe you will beat all opponents. And that is also the key that opens the door to your dream future. As you probably know, most non-specialist students despise basic computer science and don't have a good view of this first year basic computer subject. So what do you think is the cause? Not because of poor professional knowledge and little experience, but because of lack of computer skills and often do not interact and work on computers.

With today's trend of globalization or the digital era, informatics shows its importance on the way of world integration, especially for students in the 4.0 era. Informatics helps students have the opportunity to interact with international knowledge and read computer books. There are more than 1 billion web pages about informatics. Just learning a foreign language can exploit most of that knowledge. The most popular software in the world. The most popular social networks. In addition, informatics also opens up opportunities to study and exchange abroad. You can search for scholarships to study abroad as well as student exchange programs. Another important factor, information technology helps you to have high job opportunities in the era of modernization.

## **Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University**

Faced with each individual who is a good candidate in information technology, the employer will feel extremely excited and will have ideas for you to promote your full potential in international activities and events. related to informatics as demonstrated by the Mos International Office Informatics Certification Competition.

However, learning information technology is facing many difficulties. The problem that people face when learning computer is that students tend to forget what they have learned quite early from high school after they have just learned which is not often done. Another complaint when learning information technology is the persistence of learning as well as the ability of students to do their own homework.

In particular, non-specialized students at Van Lang University also face many difficulties in learning computer science. Most of the foreign students do not have access to computers. Students lose basic computer science right from high school, so it is very difficult to continue studying this subject. Most students have limited economic circumstances, so they do not have the conditions to invest in computers for computer learning. (Thu Nguyet Minh Nguyen, 2021)

Realizing the importance of computer science and the current situation of computer learning of students at Van Lang University, our team decided to choose “Difficultys and some suggestions for solutions in learning basic computer science of students at Van Lang University. non-specialized students of Van Lang University” as a research topic.

It can be seen that the research papers have invested a lot in researching the current situation of learning informatics, finding out the difficulties and solutions to learn computer well for students.

The above studies have been very successful when discussing the difficulties that students face. Those difficulties come from learning manipulation, as well as learning through learning channels. Most of the people who are poor in computer science have difficulty when they have never studied informatics at the lower level. Along with the fact that informatics is not all students who have ever approached the subject of informatics

However, research papers are limited to a specific audience and specific scope. The current situation of informatics learning of non-specialized students at Van Lang University has not been studied. In addition, there are no specific solutions for the difficulties that students face. So the problem here is that we need to know what are the difficulties of first-year non-specialized students at Van Lang University? At the same time, what solutions are there to overcome those difficulties?

The study and must pass the subject of the first year students. We wanted to sort the purposes of this study into different categories. First, a glimpse of the reality of computer science is the key for students into the future. Because Basic Informatics is a compulsory subject for first-year students of Van Lang University, students must study diligently to pass the final exam.

In addition, another goal is to help students avoid difficulties encountered in this study, and at the same time suggest solutions to students. Furthermore, we aim to provide useful references and learning channels for any interested researchers, especially junior students, to hone their knowledge.

This research can help students to realize the importance of learning information technology, thereby changing the method of computer learning to improve learning efficiency. It is a fact that nowadays, not only students but also teachers want to change teaching methods and content. for best performance. In fact, to learn computer effectively, it is necessary not only to have the right method but also to have the right instructor. In addition, our research helps teachers find the most effective method to convey to students a more positive view of computer learning as well as the curriculum content in general and the University of Literature. Lang in particular.

Moreover, with this research group's topic, we will help the school think about the difficulties that students are facing to better understand the computer program among non-computer majors.

## **2. LITERATURE REVIEW**

In addition, another tool is to help the basic computer science subject rebuild the training program to be suitable for non-

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## Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University

informatics students of the whole school, so that they will be interested and love this subject. than .

Moreover, leaders of Van Lang University will have the right vision on teaching and learning informatics at the school with the most specific and authentic data analysis. Inadequacies still exist and compared with the increasing requirements of society's computer literacy.

The results of this study can guide those who are interested in studying informatics to have the material for further study. Know more about the difficulties that football students are facing. From there, offer more reasonable training programs, suitable to the current situation.

In addition, it is also valuable for informatics teaching and learning researchers who are interested in this topic and are more interested in providing practical solutions to help students become interested in learning informatics who are not specialized in information technology. learn.

### 2.1 Research Questions

To fulfill the purpose of the study, the survey was seeking to answer the following research questions:

#### APPENDIX I – QUESTIONNAIRE

##### 1. Do students have computers to use during their studies?

- Yes
- No

##### 2. What operating system does your computer use? (VD Windows 7, Windows 10, Windows 11, MAC...)?

- Windows 7
- Windows 10
- MAC
- Khác

##### 3. With the text editor, do you know how to set up headers, page numbering and automatic table of contents?

- Yes
- No
- Know but not sure

##### 4. Have you used MS Word word processing software fluently yet?

- Yes
- No
- Know but not sure

##### 5. Have you ever designed a presentation with PowerPoint?

- Yes.
- No.
- Other

##### 6 . Have you used Excel spreadsheets?

- Yes
- No.
- Other

##### 7. Tell me about the calculation functions on Excel that you know?

- Listed.....

##### 8. With the requirements of the subject, what knowledge do you expect to be supported to complete the course and apply in the field in the best way (Word, Excel, PowerPoint)?

## Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University

Other: .....

**9. In the program, there are 6 self-study sessions and complete exercises through video lectures recorded by the instructor, provided on the Elearning page.**

**Students watch the video -> complete the exercise -> submit the assignment**

**Are you ready for this mode of learning?**

Very Ready

Ready

Not Ready

### 3. METHODS

11794 first-year non-specialist students received a prepared questionnaire and asked them to complete the questionnaire on the first day of class.

The students we chose to survey are first-year students at Van Lang University.

Our survey data is 11794 first-year students selected from the computer classes on the first day of classes at the aforementioned Van Lang University.

Since it takes a lot of time and money to survey large numbers, we only conduct the survey for first-year students.

To ensure the research results are accurate and objective, after choosing the topic, we conduct research planning and find out the results of previous studies to have the necessary information related to the research. topic. your research. Next, we randomly selected survey data from 11794 students. They were invited to answer questions in a set of questions from the computer science department about difficulties in learning computer science and to suggest solutions to make learning computer more effective.

The questionnaire consists of 9 main questions, the content of the first 9 questions focuses on collecting data on the basic knowledge to prepare for computer learning that students encounter when studying computer science at school. use the above 9 questions to collect data and propose solutions to make computer learning more effective. After collecting survey data, we processed and analyzed the collected data. Finally, we wrote a report on the results of our study.

### 4. RESULTS/FINDINGS AND DISCUSSION

According to research results of scientists around the world, learning informatics, especially informatics, is extremely necessary for us in the 4.0 era. In the strong international integration and exchange, informatics has become the golden key to modern work. Therefore, learning informatics is very important. The results of the survey on the perception of 1st year students at Van Lang University reflect that students need a computer when studying this subject. (Figure 1). In the operating system problems when students install on the computer for close contact with the curriculum taught in the classroom (Figure 2) is also the reason why students are not interested in learning. Figure 3 shows at what level the students' computer skills were exposed to Microsoft Word before entering the school. Figure 4. Shows students' proficiency in word processing programs. Figure 5 questions students with exposure and proficiency with Microsoft PowerPoint. Figure 6 asks if students have had contact with the field of calculation software through the Excel program, Figure 7 shows how many basic functions students can remember in excel software. Figure 8 needs support on this subject, especially through the three parts of MS Word, MS Excel, and MS PowerPoint. Figure 9 shows willingness to learn this computer science subject after answering basic questions. (Abubakar, 2015), (N.T.N.MINH, 2019)

APPENDIX II – TABLES AND FIGURES

Table 4.1: Do students have computers to use during their studies?

|     | Number | %   |
|-----|--------|-----|
| yes | 9935   | 84% |
| No  | 1287   | 16% |

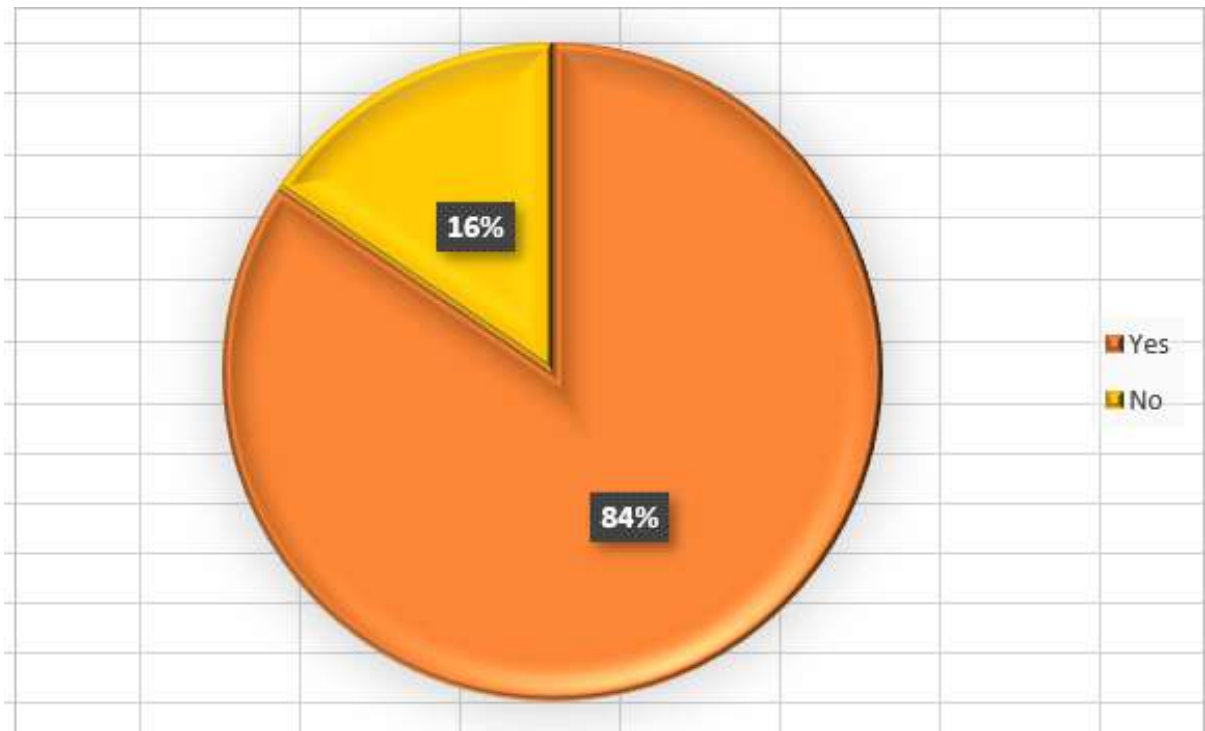


Figure 4.1: Do students have computers to use during their studies?

Table 4.2: What operating system does your computer use? (VD Windows 7, Windows 10, Windows 11, MAC...)?

|           | Number | %   |
|-----------|--------|-----|
| window 10 | 1100   | 91% |
| windows 7 | 700    | 7%  |
| MAC       | 71     | 2%  |

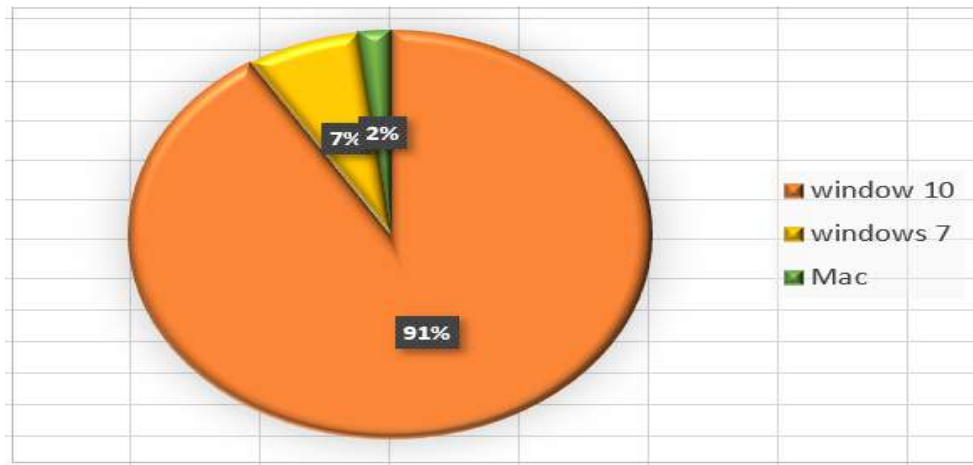


Figure 4.2: What operating system does your computer use? (VD Windows 7, Windows 10, Windows 11, MAC...)?

Table 4.3: With the text editor, do you know how to set up headers, page numbering and automatic table of contents

|                   | Con số | %   |
|-------------------|--------|-----|
| Yes               | 6063   | 52% |
| No                | 2747   | 25% |
| Know but not sure | 2955   | 23% |

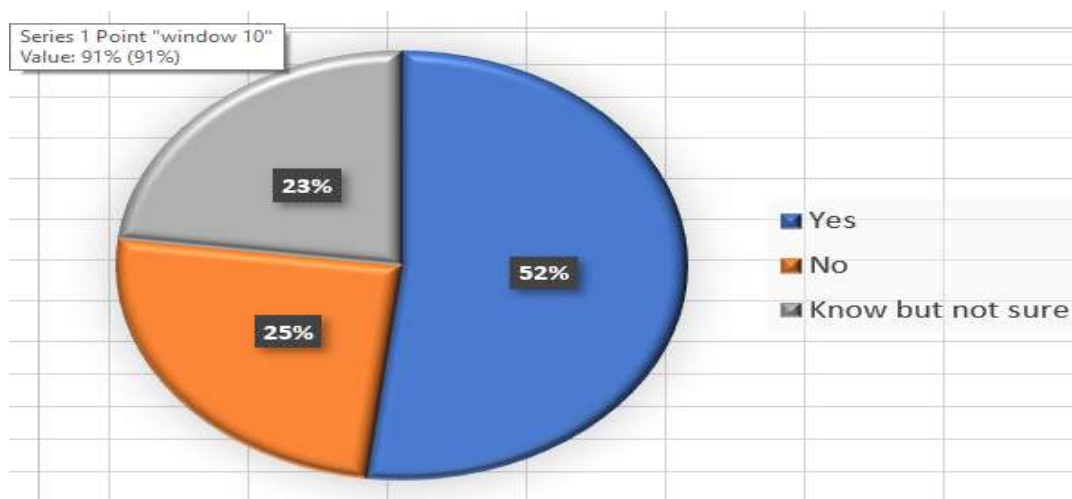


Figure 4.3: With the text editor, do you know how to set up headers, page numbering and automatic table of contents?

Table 4.4: Have you used MS Word word processing software fluently yet?

|                   | Number | %   |
|-------------------|--------|-----|
| Yes               | 2957   | 25% |
| No                | 6065   | 52% |
| Know but not sure | 2748   | 23% |

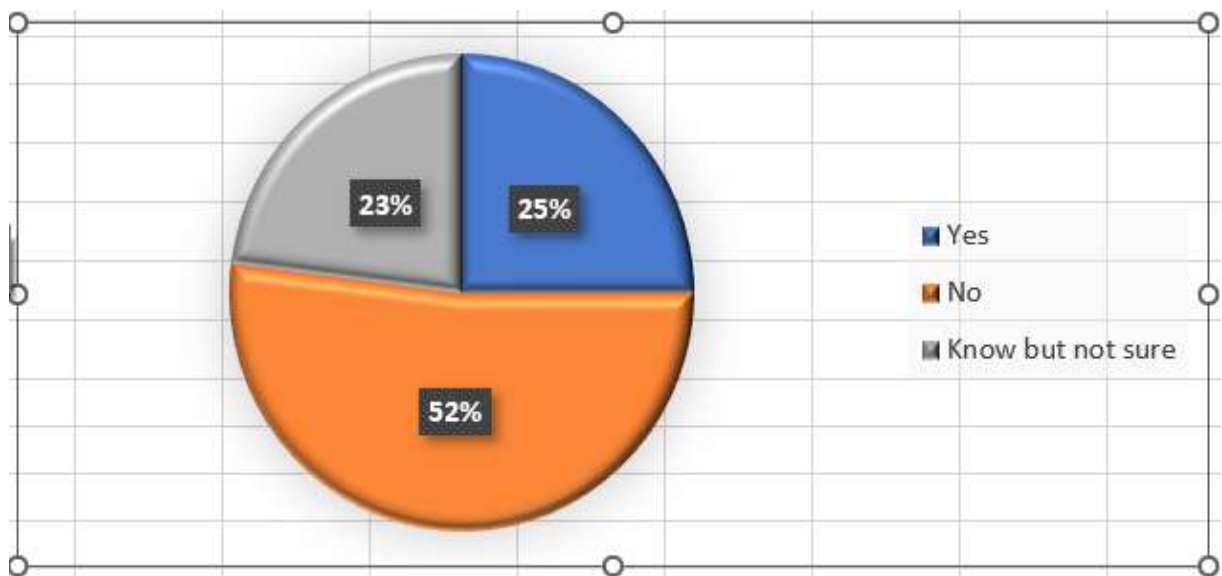


Figure 4.4: Have you used MS Word word processing software fluently yet?

Table 4.5: Have you ever designed a presentation with PowerPoint?

|       | Number | %   |
|-------|--------|-----|
| Yes   | 3668   | 31% |
| No    | 3325   | 28% |
| Other | 4769   | 41% |

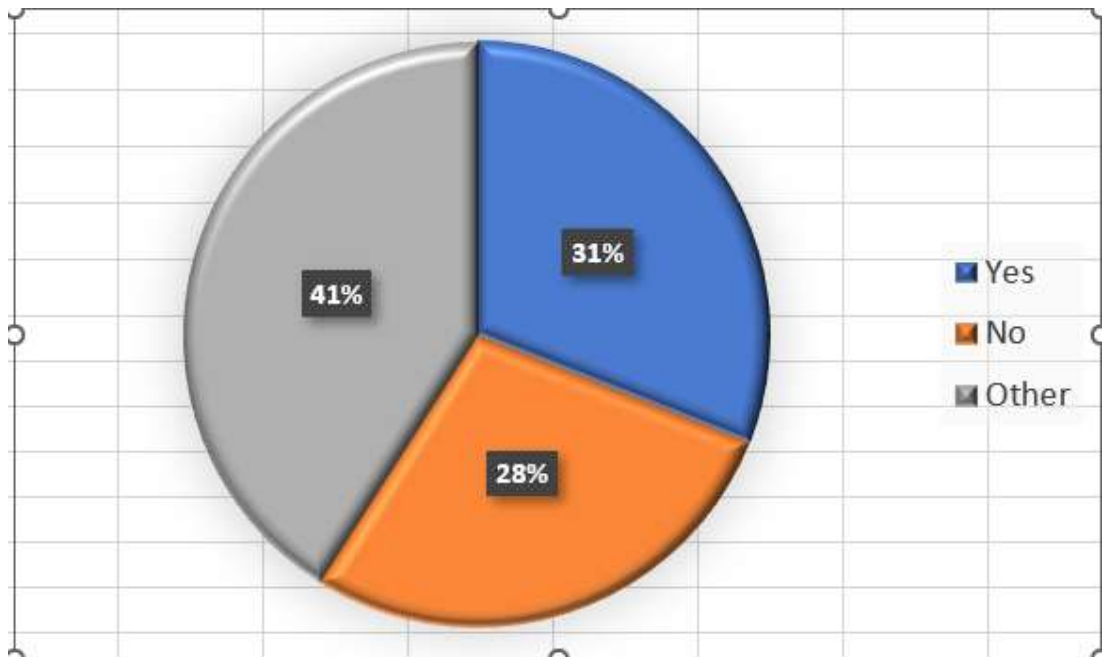


Figure 4.5: Have you ever designed a presentation with PowerPoint?

Table 4.6: Have you used Excel spreadsheets?

|       | Number | %   |
|-------|--------|-----|
| Yes   | 2804   | 24% |
| No    | 2980   | 25% |
| Other | 5952   | 51% |

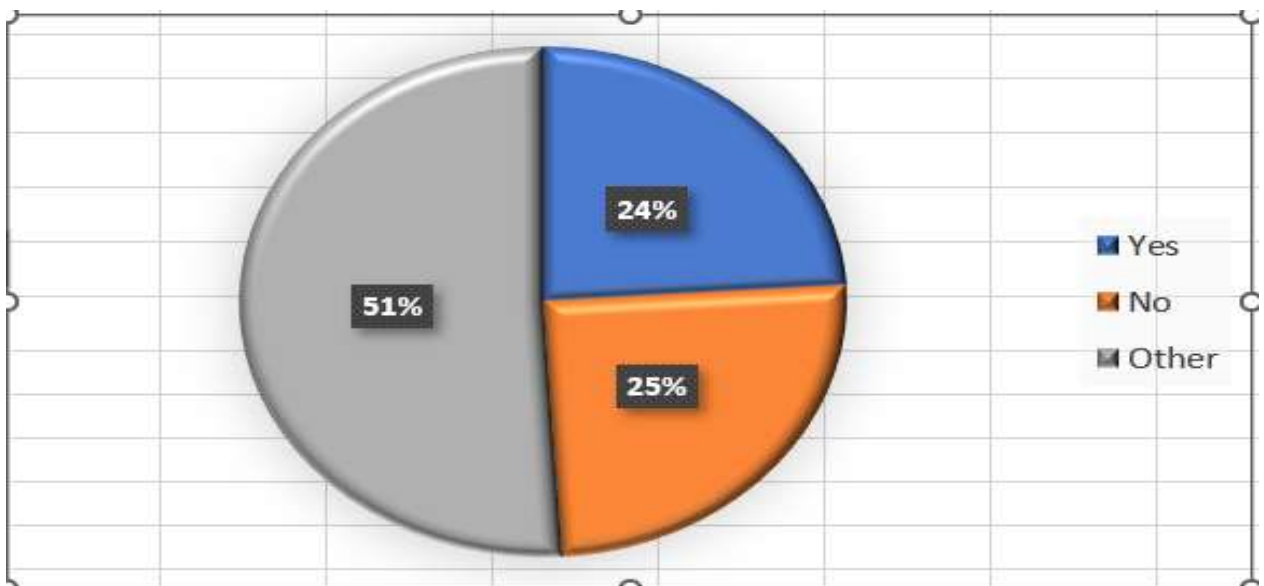


Figure 4.6: Have you used Excel spreadsheets?



Table 4.7: Tell me about the calculation functions on Excel that you know?

|          | Number | %   |
|----------|--------|-----|
| Hàm Sum  | 5500   | 47% |
| Max, Min | 5500   | 47% |
| Average  | 600    | 5%  |
| If       | 150    | 1%  |
| Khác     | 0      | 0%  |

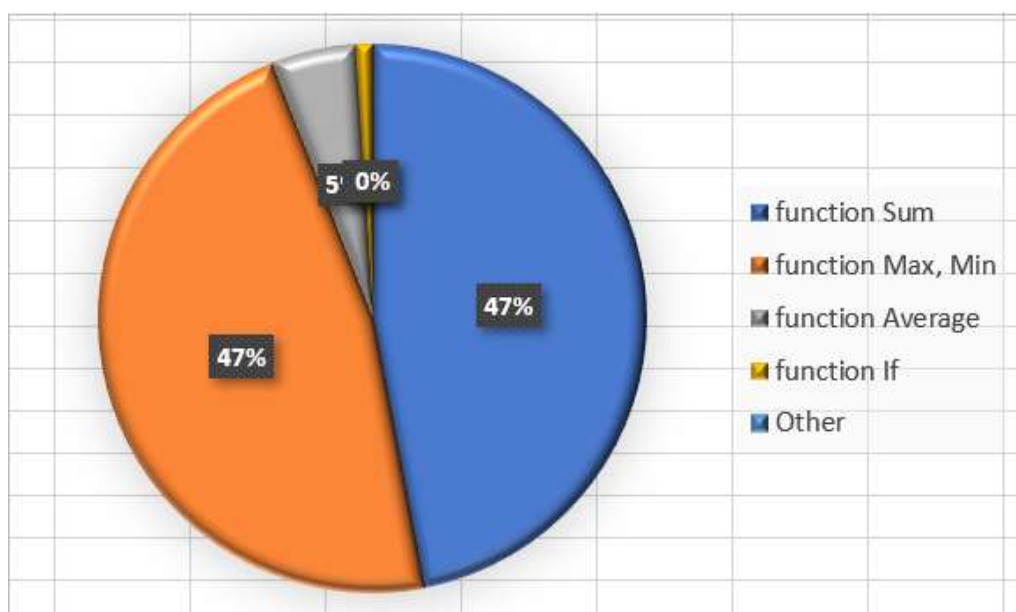


Figure 4.7: Tell me about the calculation functions on Excel that you know?

Table 4.8: With the requirements of the subject, what knowledge do you expect to be supported to complete the course and apply in the field in the best way (Word, Excel, PowerPoint)?

|            | Number | %   |
|------------|--------|-----|
| Word       | 5900   | 50% |
| Excel      | 4200   | 36% |
| Powerpoint | 1660   | 14% |

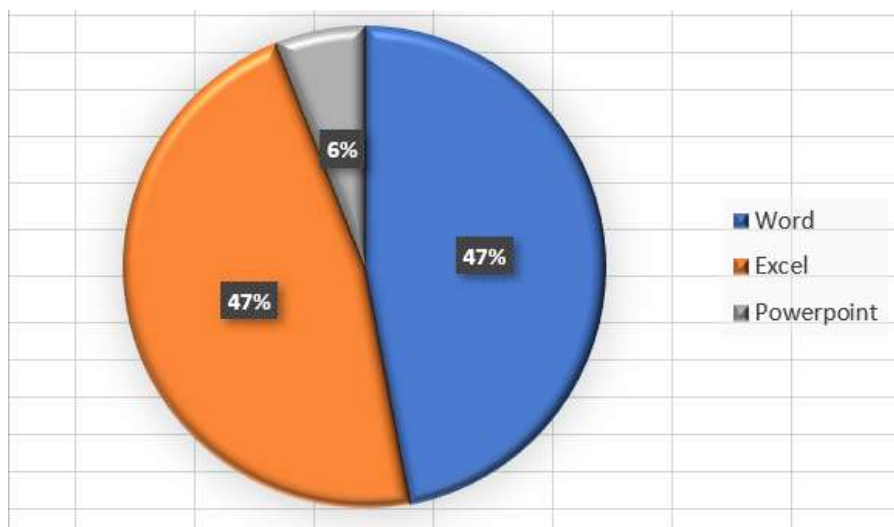


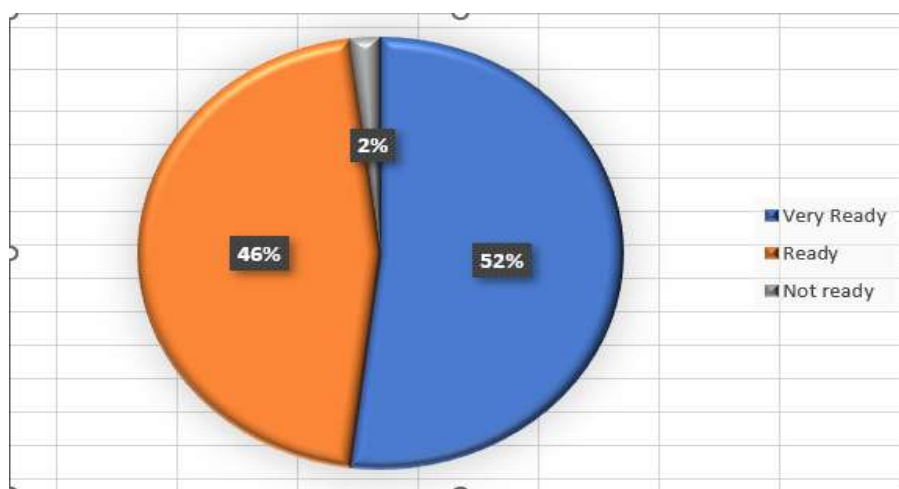
Figure 4.8: With the requirements of the subject, what knowledge do you expect to be supported to complete the course and apply in the field in the best way (Word, Excel, PowerPoint)?

Table 4.9: In the program, there are 6 self-study sessions and complete exercises through video lectures recorded by the instructor, provided on the Elearning page.

Students watch the video -> complete the exercise -> submit the assignment

Are you ready for this mode of learning?

|            | Number | %   |
|------------|--------|-----|
| Very ready | 6148   | 52% |
| Ready      | 5434   | 46% |
| Not ready  | 180    | 2%  |



Hình 4.9: Are you ready for this mode of learning?

## Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University

According to the survey results, up to 84% of the respondents said that learning information technology is very necessary for work, so the first-year students have equipped themselves with laptops, only 16% of students have not equipped them. The laptop comes from students in remote areas with difficult families. This rate does not exceed students who buy computers and have installed the operating system as desired, as required by the lecturers in accordance with the subject, with up to 91 students. %. However, when asked if students have done any manipulations in word such as numbering pages, creating a table of contents, 25% of students answered yes, while 52% of students knew but were unsure or forgot for other reasons. there are 23%. A next question is that students who have mastered Word editing software, 52% of students are not proficient, 25% of students are proficient on word editing software (but have not passed the test).

In the PowerPoint presentation design course, the number of students who know and use this software will improve because this part they often use as presentations and reports from the time they studied at the high school level such as: up to 31% of you have used and worked on this software, 41% of you have used it but were afraid and answered that you have forgotten, only a few students who have not used it, 28% also come from the you students in a small province. Like Powerpoint software, excel software is no less, 24% of students have used the software, 25% have not used it, 51% of students have used it but forgot, so the unique feature of Excel software is that we often use it. practice and exposure. Most of the students only remember the basic excel functions with 47% of them remembering the functions like sum, max, min showing that the basic excel background you forgot to remember or didn't practice. With the question of which knowledge students need to equip in three subjects such as MS Word, MS Excel, MS Powerpoint, 50% of students need to equip knowledge about MS Word, 36% of students want to equip excel knowledge and mainly students from the banking and finance department, 14% of those who like to study Powerpoint fall into the students from the graphic design department. At the end of the survey, a key question for students to ask about the student's mood is whether they are ready to learn computer science, 52% are very willing to learn, 46% of students are ready, only 2% of students are not. ready for objective reasons you choose.

### 4.1 Comment on the result

Generalization of results: The results of the present study may reflect the reality of computer learning among first-year non-IT majors.

It can be explained: The computer learning of students of Van Lang University is gradually progressing and innovating, always making students interested in learning no longer feel bored of studying this computer subject.

Determining the purpose of students' computer learning is the cause of forming a poor sense of learning in students. Students learn informatics only to solve their learning outcomes, not because of the needs and benefits that informatics brings. Therefore, learning computer science will face a lot of difficulties. Our research and survey results also reflect this fact. Stress and often not in contact with computers makes it difficult for students to absorb knowledge, not to remember the lesson content ... making their learning results very low. Even, nearly 50% of students failed to pass the computer science subject on the first test. The reason why your computer practice skills are still poor..

## 4. DISCUSSION

Theory leads us to deduce that the difficulty in learning informatics is a problem of the basic science department of Van Lang University. The findings, fortunately, support the theory. It is difficult for students to make significant progress in Informatics, but that is only one reason. Another finding was found that the unrealistic subject matter of each reading made computing more difficult to understand. Besides, crowded class is a secondary factor that makes learning computer difficult for many students because they are distracted by many things such as: chatting, using smartphones, sleeping... The minor reason we find is the rigidity of the lecturer, we believe that the attitude of the lecturer affects the students' performance. If the teacher is too strict, the

## Difficulty and Some Solutions for Students not Specializing in Information at Van Lang University

students will be pressured and gradually become tense and nervous. One possible explanation for these findings is that students focus too much on other subjects because computer science is not the only compulsory subject in their curriculum. Another reason may be that in the minds of students, they will not often use computer science for their future work, so they clearly see that studying computer science is only to pass the final exam or meet the requirements, required to graduate. Understanding that the study of the difficulties in learning informatics of students at Van Lang University is a very broad field, the Department of General Informatics is not only a representative place for computer learning problems, but just a smaller site, to make our research easier.

### 5. CONCLUSION

The approach outlined in this study can be replicated in other university departments not only in Ho Chi Minh City but also in other cities in Vietnam to access materials for further studies, according to. Other researchers may find holes to conduct their own research in the future. We believe that more and more researchers delve into this field, which will help many readers such as lecturers, education ministers, parents, etc., to properly perceive the relationship between their computer learning, students and their jobs after graduation. Therefore, many solutions such as reforming textbooks, changing teaching methods, and adding recreational activities during class hours will be planned. Students will absorb and informatics will never be difficult again.

### Acknowledgments

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