A Survey on College Education Using Internet

Xia Huang[1(✉)], Xia Liu[1(✉)], Yi-nan Chen[1], Ying-ying Liu[2],
and Fei Lang[3]

[1] Sanya Aviation and Tourism College, Sanya 572000, Hainan, China
4947249@qq.com, paolo_lx@qq.com, 305780161@qq.com
[2] Harbin 47 middle school, Harbin 150000, Heilongjiang, China
14396166@qq.com
[3] School of Foreign Language, Harbin University of Science and Technology,
Harbin 150000, Heilongjiang, China
langfeihust@163.com

Abstract. With the rapid development of network technology, the vast amounts of applications on internet bring big impact to traditional methods on teaching and researching. To understand the status of network applications on teaching and researching, the author of this article carried out a survey to higher vocational college teachers and students, combining face to face and internet survey, to make a start for future valuable research and provide help to network technology application on teaching and researching.

Keywords: Network technology · Teaching · Research · Survey report

1 Introduction

With the rapid development of network technology, various applications based on the internet have brought great impact to the traditional teaching and research method, which has caused the revolution of education method to adapt to the internet technology. This is unstoppable trend. How the relationship between the teacher and student will change? How the teaching method as well as the way to study will change? And what changes have taken place in the attitude and ways of students' learning? When the internet technology affected the education and study process, how the teacher and student adapt to it, what kind of support they required? Based on these considerations, this research used survey and face to face interview, to understand the status on how the network technologies are used in vocational school teaching.

2 Survey and Sampling

This Survey consists of two parts, one for students on how the network technology impacts your study? One for teachers on 'Network technology impact your teaching and study'. It designs to understand how the teacher is aware of the network technology and how frequent to use them, to understand how they use them in teaching, to understand if they get any support from school and education bureau (Is there any good

hardware and training system?), to understand if the student is good to use them, and if they like the way of teaching.

This Survey was issued via internet, mainly to college teachers and college students; we received 65 effective feedbacks from the teachers and 165 copies from the students. Majority of the questionnaires are subjective type questions, and all in anomalous to maintain the integrity of the study.

To further understand how the teachers and students welcome the network environment teaching, after the survey we conducted comprehensive face to face interview to some college teachers and students majoring in computer science. These materials were sorted and analyzed for this article.

3   Survey Result and Analysis

Regarding how the education management departments support the network technology teaching, refer to Fig. 1, most of them continue to invest on hardware, such as school website, multimedia classroom, computer lab, training lab, electronic reading room etc. However we notice they are slightly short of training to the teacher on how to use these information technologies, as well as on the development of the network teaching platform. In additional, based on the on-site visiting, mainland vocational school made better progress, they developed network teaching platform earlier, CAT made good results, it is a major part of the teaching and becomes the second classroom now. While in Hainan province, the vocational schools need a lot of improvement.
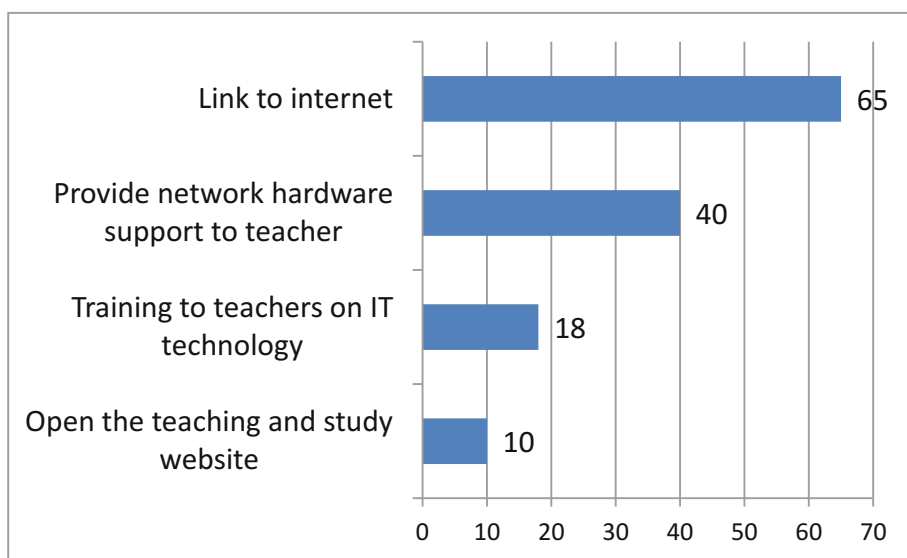

Fig. 1. Network technology support from college to teachers for teaching and study

How familiar and how frequent the teacher use network technology? All teachers agree it is better to teach using network technology, also they are aware of the ways to use network technology on teaching, majority of the teachers are familiar with network technology such as multimedia, resource sharing, mobile internet etc., 90% teachers are familiar with multimedia technology, while only 20% are aware of cloud service and remote teaching. Refer to Fig. 2, teachers who send back the survey use network technology more frequently in pre-class and after-class tutoring sessions.
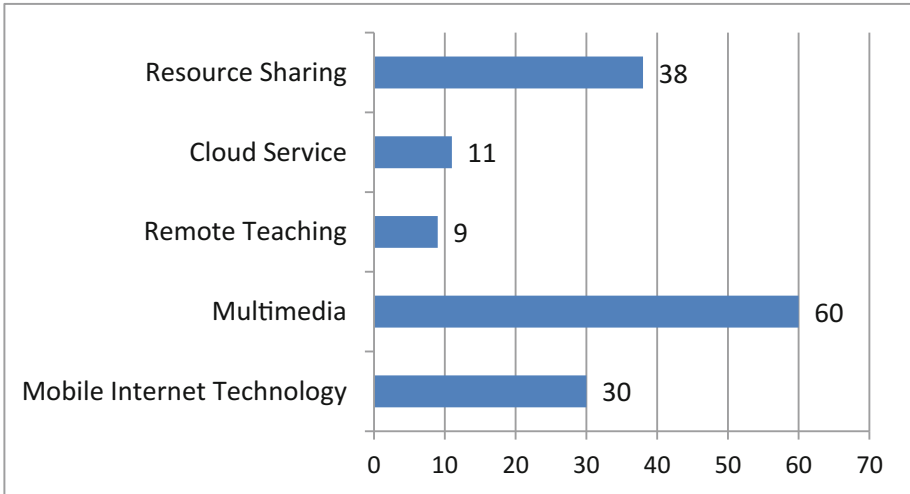

Fig. 2. Teacher uses network technology during instruction

Status of teachers using network technology in teaching and the depth to use them. Currently most of teachers only use the network technology in per-class preparation session, majority are to use internet to search information. Only 50% use network technology during class and after class instruction. Very few use network technology to create the learning environment, or use multimedia in class. Very few write specified teaching software. They did not make use of the network's multi-directional, rich and convenient features. At the same time, teachers are lack of knowledge to guide the students to use the network technology. Teachers do not improve students' capability to use the information resource efficiently to resolve the problem. More than 90% teachers think they need training to improve their network technology (Table 1).

Table 1. Feedback from the teacher if their current network technology needs improvement and training

Altitude	Quantity	Percentage
Not unnecessary	1	1.54%
Very necessarily	59	90.77%
In between	5	7.69%

Status of students to support network style teaching.

Students almost use internet every day, More than 65% students use the network for games, chatting and shopping, refer to Fig. 3. Within the 165 students provided feedback, more than 70% think they need improve their network technology and need training, refer to Table 2.
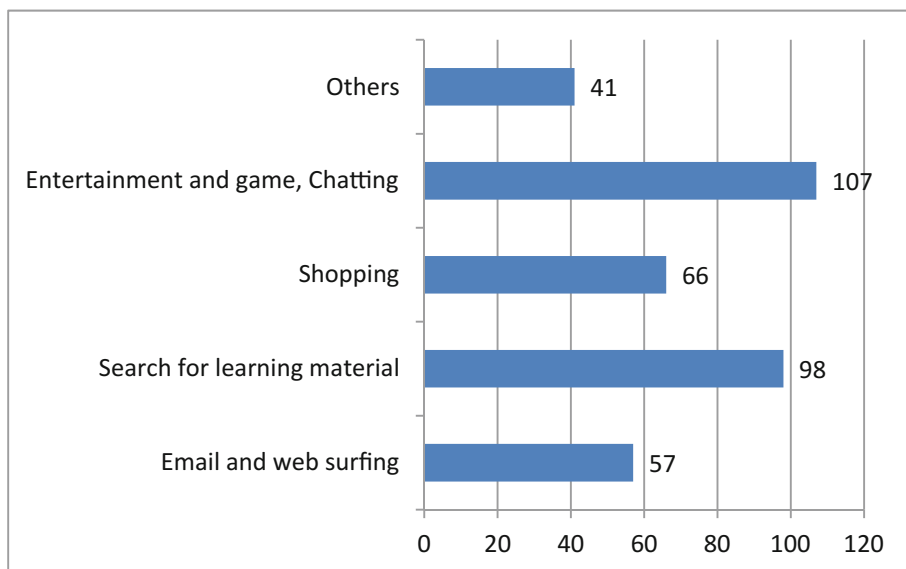

Fig. 3. Activities for students to use the internet

Table 2. Feedback from students if their network skills need to be improved

Feedback	Quantity	Percentage
Unnecessary	2	1.21%
Very necessary	122	73.94%
In between	41	24.85%

Feedback on the acceptance to network style teaching from the students.

More than 67% think network style teaching is better than traditional instruction. They think it is more effective, refer to Table 3. Almost all students who joined the survey think network technology adapted classes are more alive and agile, it can encourage students to study more actively, and teachers should provide network technology support. Feedback from 65 teachers, 68.86% teachers think the students can learn more effectively, only 21.31% teachers think there is not much difference comparing with traditional teaching, only 9.84% teachers think network technology style can bring distraction, which impacts the efficiency of study.

Table 3. Feedback on network technology adapted class and traditional class

	Quantity	Percentage
Network technology style class is more effective	111	67.27%
Traditional class is more effective	30	18.18%
Not much difference	24	14.55%

4   Problem Finding During Survey

During the face to face interview with students and teachers, and the feedback from on-line survey, we found following problems.

Teachers use very simple network technology, which need to be improved. Many teachers only assess basic level of network technologies such as electronic black board, electronic PPT, using network course material etc. [1]. Classroom is still based on intranet environment to use multimedia. They do not use virtue lab, intellectual class room. Teachers do not have enough skill to deeply link the teaching with information technology; Teacher can not use network technology to innovate the teaching process.

During the teaching process, teachers do not provide enough guidance to help students to utilize network technology, majority will ask the students to find learning material from internet, check email, group chat etc., they do not lead the students to improve the capability of problem analyzing or resolution. Network and multimedia technology are only aided tool for teacher to do demonstration; it does not evolve into the tooling to guide the learning and communication, or as a tooling to improve students' interest [2].

Most of students' network technology application skills need to be improved. Students use the network frequently, but majority are chatting or shopping. Only small part of students use it for self-study. IM (Instant Message) and searching engine are the majority ways for students to adapt to network study, very basic level study such as Baidu searching and IM chatting to solve the problem, lack of depth self-study.

Colleges do not pay attention to invest school network resource library. Most of college do not have independent teaching and study website. Some college may have significant amounts of network course resources, but lack of high quality and attractive digital teaching resources; they do not use it very frequently, and do not bring much benefit [3]. In addition, colleges do not provide much training to teachers on how to use network technology to teach and study, many teachers can only use it to combine PPT, and need to improve skills to produce high quality interactive teaching materials.

5   Conclusion

Through the field face to face investigation and questionnaire survey, we can see most colleges already invested a lot. Majority colleges have high performance and multi-functional school network. Classroom and training lab are installed with multimedia projectors. Some schools even have their own network course platform. Majority Colleges and teachers believe network technology application is future trend; they all

start to pay attention. However, we also notice there are a lot of shortage to use network technology to teach and study in these colleges, such as teachers are lack of skill, they need training to improve. Students do not use network tooling to study initiatively which need guidance from teachers. Also lack of investment on course resources, they do not have much high quality digital course material etc. To solve these problems, the education bureau, colleges and teachers all need work hard, using multimedia and new network technologies, to optimize the class teaching, improve the class efficiency and teaching quality.

References

1. Li, B.: Discussion on the teaching mode of computer network technology innovation. Comput. CD Softw. Appl. **24**, 219–221 (2014)
2. Gai, K.-R.: Research and practice of informatization teaching in higher vocational courses. Chin. Vocat. Tech. Educ. **26**, 18–21 (2015)
3. He, K.-K., Wu, J.: The first academic paper of teaching models research series about integrating information technology into curriculum—the connotation and categories about models. Mod. Educ. Technol. **7**, 5 (2018)