

ICT EDUCATION IN VIETNAM

Danang University Of Economics, Vietnam

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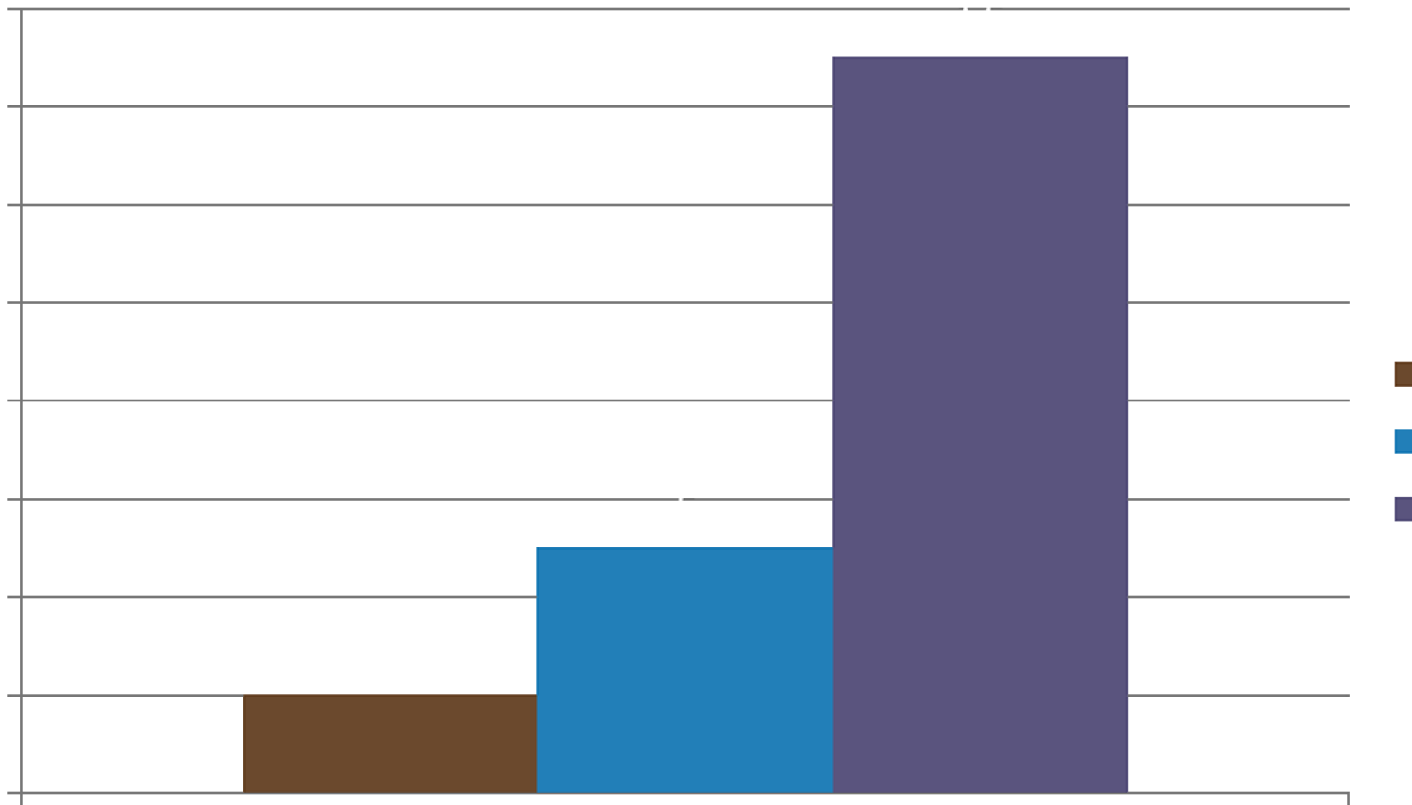
1. Strategic perspectives in education and training

2

- .. It is possible to achieve quick socio-economic development to some extent, but it requires a long time and a correct orientation to develop education and science
- .. Information and Communication Technologies (ICT) teaching and learning are influenced by its training perspectives, aims, and also, the strategies to achieve them

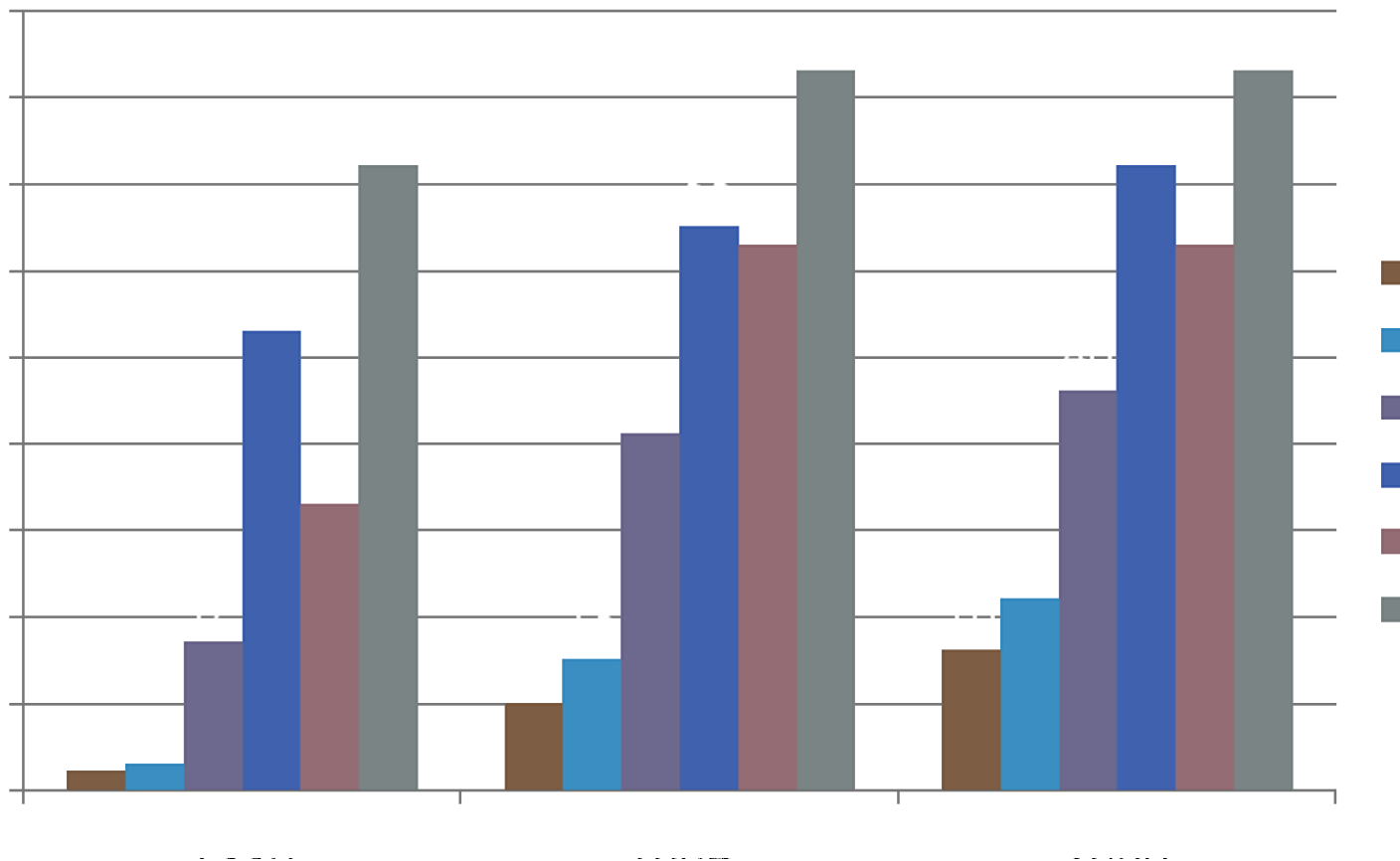
Number of people having 13 or more years of education

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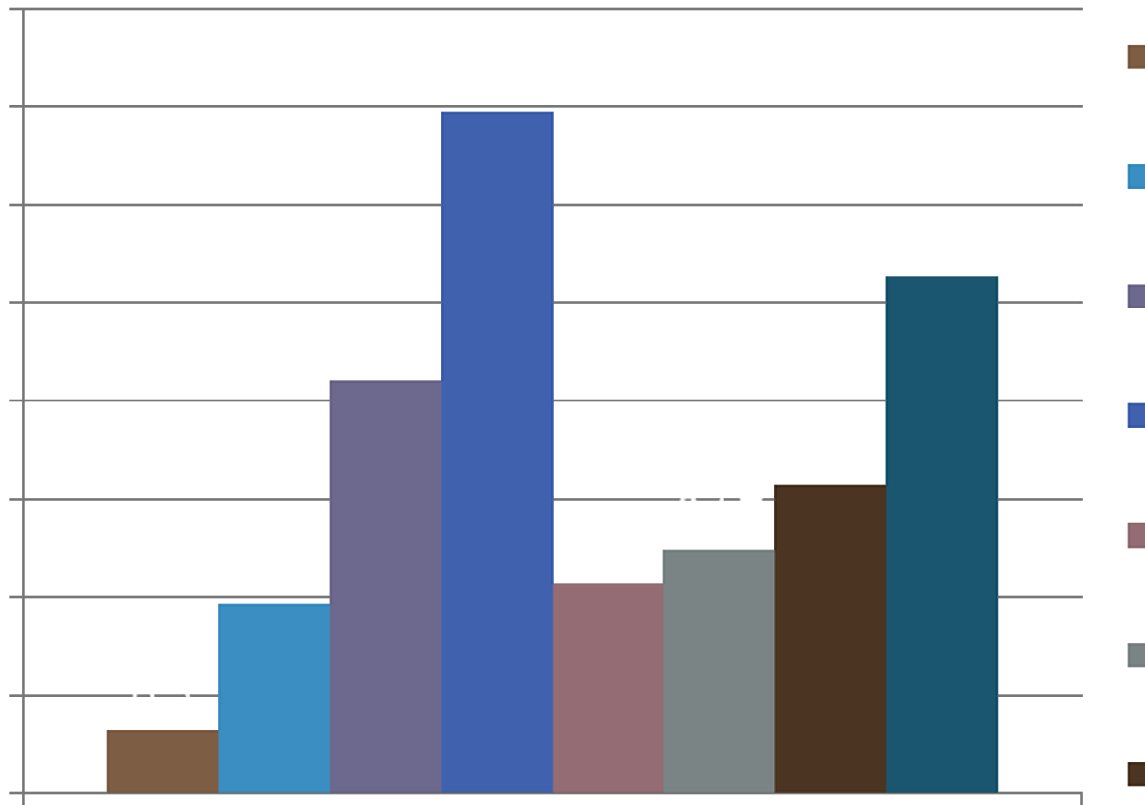
Gross enrolment ratio – percentage of relevant age group attending higher education

4



Gross enrolment ratio (Income & Region)

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Strategic plan for education 2001-2010

6

- .. Education is made the top national policy priority
- .. Education should be people-based, state-of-art and socialist-oriented
- .. Educational development should be closely combined with its socio-economic development needs, scientific and technological advances, national defense and security consolidation
- .. Education is the task of the entire Party, nation and people

Solutions to achieve proposed aims

7

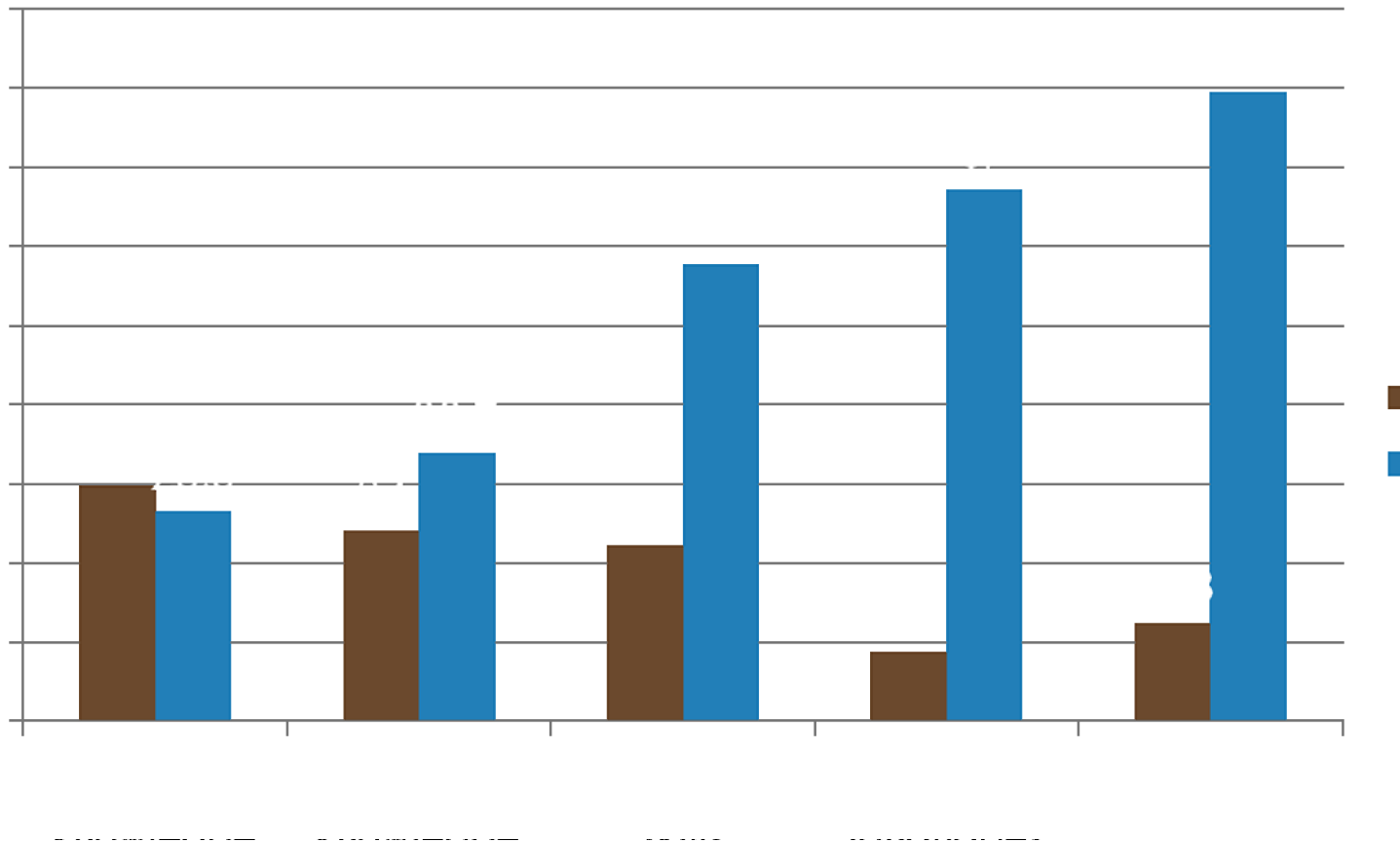
- .. Renew the training objectives, content and curriculum
- .. Develop teaching staff, renew teaching methodologies
- .. Renovate educational management
- .. Intensify the material conditions for education
- .. Increase budget for education
- .. Strongly accelerate the popularization of education
- .. Enhance international cooperation in education

Problems

- .. Vietnam's current training methods generally lie somewhere between content and objective approaches. Teaching mainly aims at transmitting knowledge rather than focusing on the learners
- .. Material conditions for education have in the main, been improved but are still insufficient in terms of both quantity and quality
- .. There is still a very big gap between training results and social demands. There has not been a specific study that can forecast the human resource needs of a single sector in general and of ICT in particular

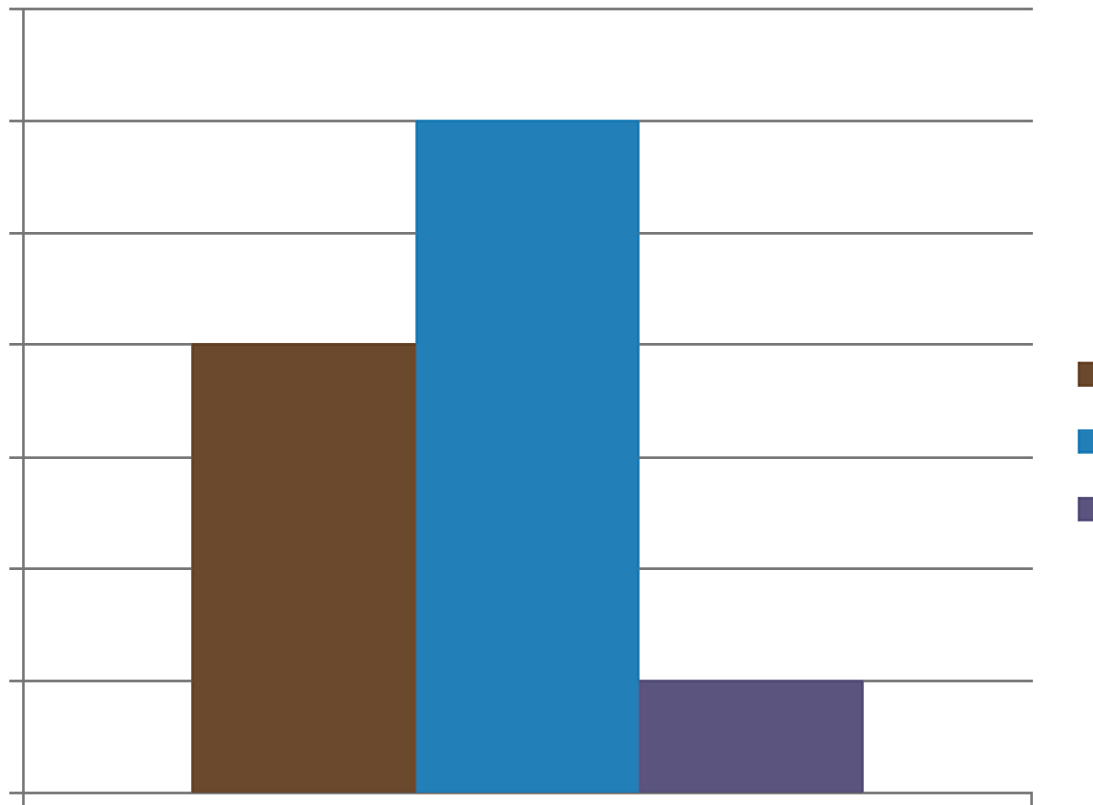
Training quantity: 300 interviewed ICT employers

9



Training quantity: Recruitment and Test

10



Training quantity: But...

11

The Industrial Policies and Strategies Institute:

- Enterprises contended that the strengths of Vietnamese students are good IT skills. Programmers as well as students in progress must have both long-term and short-term investment.
- Society does not perceive the practical value of training.
- Ø On one side, we contend that it is right!

ICT Human Resource Needs

12

- .. The five biggest companies in the world, Intel, Renesas, Campal, Samsung, and Foxcon, have decided to invest approximately USD10 billion into Vietnam – they need the ICT human resource in terms of both quantity and quality
- .. IBM Global Delivery Center – 3.000
- .. Boeing Corporation contractors – 1.000 for each
- .. Vinasa – 5.000
- .. FPT – 3.000

Situations

13

- .. The labor cost was also low, equaling to approximately half of India's. On other side, it is not very good, because it can be the signature of low labor quality
- .. From 2006 backwards, the workforce in general and the ICT workforce in particular experienced a low rate of turnover, between 7 and 10% in 2006
- .. It is difficult for Vietnam to repeat its same old cheap labor strategy; its ICT laborers need to be technologically capable

Solutions for IT human resources up to 2015

14

- .. Enhance the ability of the ICT teaching staff, ensure each college or university to reach the 15:1 ICT student-teacher ratio
- .. Increase the teachers' ability in a way that reaches 50% of the teachers hold a master degree and 30% of the teachers hold a doctoral degree
- .. Increase the training scales and types
- .. renew teaching content and methods
- .. increase the instruction of English and the instruction of ICT through the use of English

2. Material conditions

- .. The material conditions for teaching and learning are still insufficient in terms of both quality and quantity
- .. There are not many quality, especially new and imported, reference materials
- .. There are almost no publications that are made domestically on the basis of the results from scientific research presented at international symposiums or foreign-made high-quality materials

If ICT students are well facilitated in their practice

16

- .. If there is a good combination of a university and a socio-economic organization and research institutions, investment into material conditions will no longer be a problem
- .. In several schools that belong to a corporation, human resource training is for its own corporation, so teaching and learning facilities and equipment are fairly satisfactory

3. Training quality

17

- .. Since November 2006, Vietnam has changed its ICT training orientation from self-efficacy to needs-based
- .. The training quantity is high, but the quality is low, not being able to meet social demands
- .. The current ICT workforce is superfluous in terms of quantity, but it is insufficient in term of quality – does not meet the demands of society.

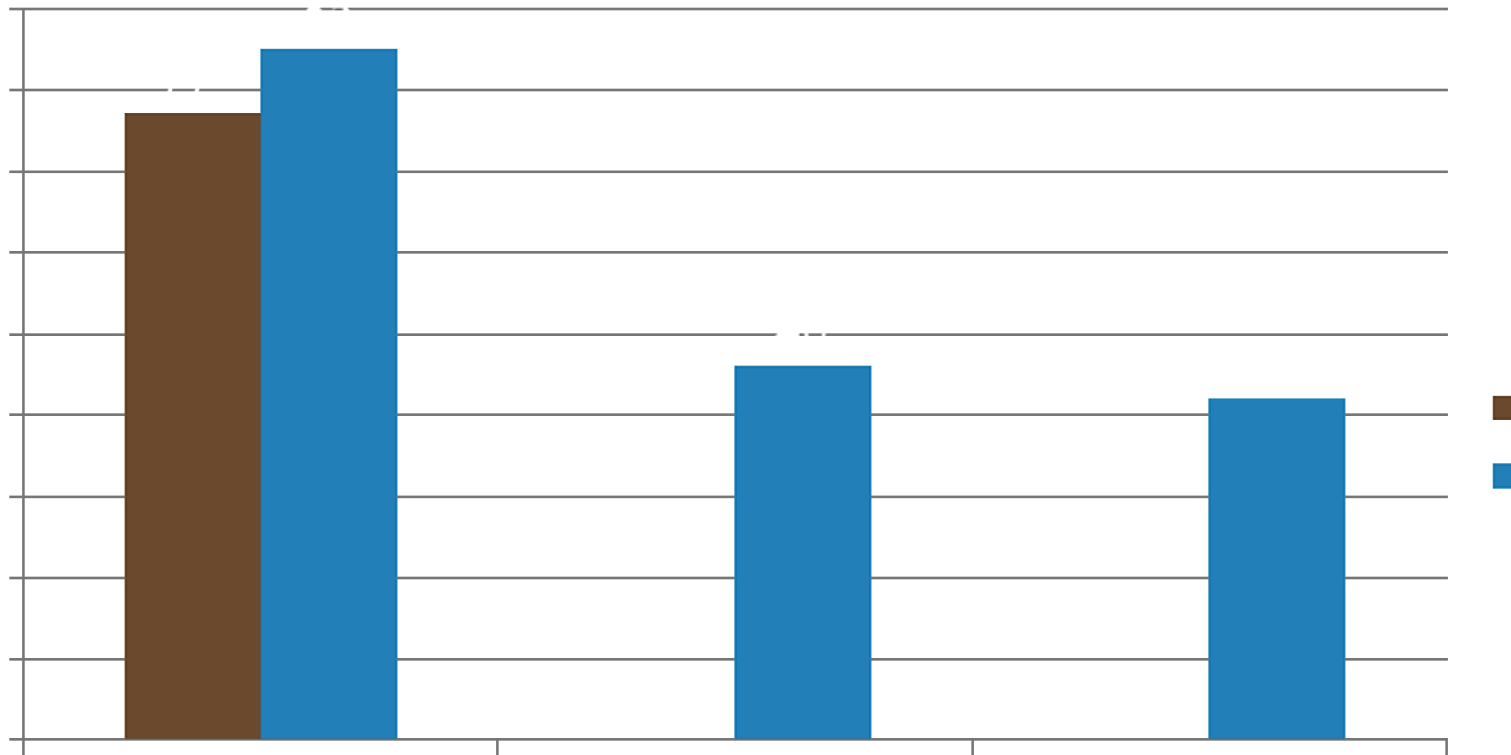
ICT training quality is still low

18

- .. The gap in ICT training between Vietnam and other countries in the world, including even in the region, is still big
- .. Although training quotas for ICT are high, the number of students who can work hands-on right after graduation is not high
- .. As can be seen from job fairs, ICT recruitments of big companies and corporations, the majority of ICT bachelors do not meet employers' requirements
- .. Socio-economics institutions mainly retrain them

The majority of ICT bachelors do not meet employers' requirements

19



Reasons of low quantity

20

- .. May be?
 - ∅ Training curricula in Vietnam in general and the ICT training curriculum in Vietnam in particular focus more on theory than practice
 - ∅ Students practical skills and techniques need are not satisfied
 - ∅ ICT programs should provide students more with practical knowledge than with theoretical and academic information, in other words, practical training is more important and to some extent it can replace academic training

Reasons of low quantity

21

- .. We think that this is a dangerous way, and trend, of thinking, because it can turn universities into vocational training schools
- .. Maybe training curricula are still improper and lack a focus on practical skills because of a number of reasons, such as lack of facilities, laboratories, practicum sites, ability of teachers, etc., not because the program is too academic

Reasons of low quantity

22

- .. Firstly, we are now approaching a new era, an era in which studying is for life long
- .. Secondly, we now have a huge amount of information that changes very quickly, including that in the field of ICT
 - ∅ It is projected that information would change at the rate of 50% every two years
 - ∅ If a bachelor degree student is equipped with only practical skills but no fundamental knowledge and principles, he will need a complete retraining once new tools or technologies emerge
 - ∅ A university bachelor has the foundation which allows him to take a special national training certificate in the area that his employer requires of him in a short period of time

Reasons of low quantity

23

- .. Thirdly, university education develops in its products a high reasoning and thinking ability
 - ∅ If what is needed is only a practical skill, a worker finishing vocational education can fill the bill
- .. The fourth issue concerns directly personnel recruiters
 - ∅ We view that a majority of them are not trained formally in ICT, and so they cannot identify the exact ICT development goals of their company, and hence their goal in recruitment. As a result, they did not select the right people.

Reasons of low quantity

24

- ICT training in Vietnam universities mainly revolves around system development, IT experts and trainers and, obviously, does not meet requirements of special areas
- There was a severe lack of lecturers and experts with special expertise
 - ∅ For quite a long time, a majority of lecturers of ICT were not those mainly trained in ICT, but transferred from such fields as mathematics, physics and others to make up for the deficiency of ICT lecturers

Reasons of low quantity

25

- .. A Vietnamese graduate from an overseas university in ICT has a better chance of a better job and, obviously, higher remuneration than an in-country trained, and as a matter of fact, they also have much higher work ability
 - ∅ Many people argue that the training curricula of these countries focus more on practice than on theory and Vietnam should change accordingly
 - ∅ Their program is much more academic than ours, but their students have better opportunities to practice because they enjoy better material conditions and have a chance to do a serious practicum in a better socio-economic institution

Reasons of low quality

26

- q A Vietnamese graduate from an overseas...
 - ∅ They are trained in communication, cooperation and teamwork skills
 - ∅ Overseas lecturers have better practical knowledge than Vietnamese counterparts
 - ∅ ICT training requires state-of-art facilities and equipment, which a number of socio-economic institutions in Vietnam find it difficult to satisfy and even not all of their employees are allowed to use those systems either

Reasons of low quantity

27

- Gaps are present not only in a student's practical skills training but also in the whole system of university education in Vietnam
 - ∅ For instance, in a selection of candidates for graduate training in Japan and Korea, Vietnamese students not only lack practical skills but also have a big general knowledge gap
 - ∅ As regards to Vietnam ICT training curriculum, not only the special but also the fundamental content are a little outdated

Reasons of low quantity

28

- ∞ Gaps are present not only...
 - ∅ Training programs all over the world tend to be shortened in terms of number of credits and time length, but still ensures its quality in terms of learners' special knowledge and professional skills; but in Vietnam, this truncation is more of a mechanical move than an adjustment made to the content of each module and its relative training methodology

Reasons of low quantity

29

- .. Another factor that causes the low quality of training in Vietnam derives from students themselves
 - ∅ Students seem not to care about subjects that they view unnecessary (though they are still too immature to judge) or they do not like
 - ∅ Their objective in learning a particular subject is to get a high grade
 - ∅ Besides, they do not have or lack the ability to locate the relative position of each subject in the entire training program and connect them all together; The system allows and requires lecturers to come to class separately just to finish their own task

The curriculum frame stipulated by MOET

30

- .. It occupies 80% of a total training program, including the fundamental content, which is often called the hard part of a training program, includes the curriculum, the core knowledge that seldom varies over time
- .. Opinions: It is too rigid, forcing students to learn so many similar subjects, which they find unnecessary and do not take seriously while it is possible to replace them with the subjects that more necessary for them; So to some extent, students' time has been wasted in vain

Strengths and weaknesses of those opinions

31

- .. Not all universities have strong enough staff to design as good training programs as those in progressive countries
- .. There seems to be a high and dangerous tendency that we focus so much on the expertise training without paying due attention to the political, social and human aspects, including students' adaptability to their work environment and changes in the socio-economic environment

Our opinions

32

- .. Quality ICT training culture should not exclude traditional cultural values
 - ∅ An ICT worker should first be a person of a civilized culture
 - ∅ Vietnamese ICT students need more training in culture, industrial work-style, communication skills, and ability to work independently and flexibly as well as ability to work in a team
 - ∅ Our mandate is not to train workers as an end, but to equip them in a way for them to become all-rounded bachelors, for them to develop further both academically and professionally, and because of high interference between various fields of life

Our opinions

33

- q On MOET curriculum frame
 - ∅ Very few schools in Vietnam have a strong enough workforce in order to develop a good enough training curriculum in a specific field, and so a curriculum frame mandated by MOET becomes a necessity
 - ∅ The curriculum frame might be rigid but still leaves room, 20%, for each school to create a difference peculiar to that school
 - ∅ Bachelors might graduate from different universities but hold degrees of the same level; so they must be alike within some standards that their degrees are issued

Our opinions

34

- .. The current ICT training curricula are not heavy
 - ∅ Teaching methods are not diversified and are not applied correctly to be able to motivate students. Teachers transmit the knowledge and students listen and memorize, without requiring and facilitating them to search for materials, read books and think for them
 - ∅ The teacher staff is still weak in terms of both quantity and quality of special knowledge and pedagogical skills, a teacher has to teach several different subjects, to be in charge of several classes, the teacher himself cannot afford time to study and research materials to help students

Our opinions

35

- The teacher staff is still weak
 - ∅ A university's working environment and opportunities for scientific research and professional development are also not as good
 - ∅ The number of the Vietnamese leading specialists in science and technology is still low, especially, there are almost no leading specialists in ICT departments at universities

Our opinions

36

- The teacher staff is still weak
 - ∅ There is almost no leading interdisciplinary specialists to help in the design of a good training program
 - ü Universities need to enhance their cooperation with ICT corporations and enterprises, ICT research institutes and other socio-economic organizations, need enhancing to invite their ICT experts to participate in ICT teaching on their own campus

On-line training

37

- Combined or complete on-line training is expanded on a large scale in many universities
 - ◊ Although the quality of this type of training is not as high as that of the traditional learning method, according to some experts, it could help reduce the currently high student-to-lecture ratio in training in general and in ICT training in particular; It is also expected to accordingly help boost the quality of ICT training by providing lecturers with more time for research, study and updates on the new ICT technology, which they will, in their turn, transfer to their students
- E-learning in combination with the traditional learning mode has been applied at the Danang University of Economics for nearly three years with hundreds of different offerings

4. ICT Training at the Danang University of Economics

38

- The junior college level Management Information System program, which is fairly new in Vietnam, has recruited students for 4 years; Two years ago, this program was updated into a regular four-year university level program to recruit 80 students a year
- To improve the teaching staff's practical experience, we encourage them to learn from outside ICT enterprises so that they could help develop systems for our university

Improvement in teaching staff's practical experience

39

- .. Our MIS teaching staff have succeeded in building and executing successfully year-based training management systems, credit-training management systems, computer – user management, finance management
- .. They are planning to deploy the use of automatic line-up and administrative support systems with students at the training department through the Client-Server architecture, the documents and papers management system through websites and the automatic responding system through voices and Sims, the multimedia communication system which shall then be integrated with the e-learning training system
- .. However, these systems are presently being set up and operating separately so that schools still find it very difficult to bring them into their work

Material conditions for IT training

40

- .. Although the strong investment in material conditions was made, the ICT infrastructure has not still met users' demands, especially because of a poorly weak host computer system and the speed of link
 - ∅ All systems, the e-learning subsystem based on Moodle with the peak page-views of 1.000, the learning management subsystem with the number of access can reach up to 1.500 at peak hours, including the library management system and all others are connected outside only with a 2-Mbit leased line
 - ∅ There is very few specific licensed programs for majors training

CONCLUSION: Situations

41

- .. Vietnam is implementing strategies to realize its perspectives and set objectives to develop higher education in general and ICT training in particular to a world level
- .. There are still a lot of controversies that need to be resolved around university education in general and ICT teaching and learning in universities in Vietnam in particular
- .. Our training quality is still low compared with the standards of the world and of some progressive countries in the region and the world

CONCLUSION: Situations

42

- .. The training curricula are out of date
- .. The teaching and learning methods are passive
- .. The material conditions are still weak
- .. The teaching staff still has a lot of problems in both of their special knowledge and their pedagogical skills
- .. The training results do not match the social requirements, especially in practical skills

CONCLUSION: Needs

43

- .. Society should pay more attention to education, particularly in terms of mechanisms, material conditions and remuneration packages for teachers
- .. It is also necessary to develop teaching staff strong in both quantity and quality, committed to teaching, highly able, and highly agreeable to the creation or acceptance of good training curricula, to the implementation of the training curricula that have been developed
- .. Of course, a talented leading staff with high commitment is of primal importance

The end...



Thanks for your attention

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