

**Survey on ICT in Education**  
**Current Status and Targets for 2020 in Vietnam**  
**Report**

**1. Introduction**

**1.1.Key players’ meeting**

On 16 March 32 key players in the field of ICT in education in Vietnam from more than 20 different organizations from the public and private sector as well as development partners, met in Hanoi for a meeting on ICT integration in education. The key players’ meeting was organized by the Flemish Association for Development Cooperation and Technical Assistance (VVOB), in association with the Vietnam National Institute for Educational Sciences (VNIES), the British Council (BC) in Vietnam and UNESCO. The objective of the meeting was to enhance dialogue on ICT in education in Vietnam and to facilitate key players to explore potential areas for cooperation.

Ten different key players presented their current and planned activities in the field of ICT in education in Vietnam and identified possible areas for cooperation. The ICT department of the MOET announced that the MOET is developing an ICT in education masterplan for the period 2015-2020 and invited all key players to share their experience with and insight in ICT integration in education in Vietnam.

**1.2.Online survey on dimensions of ICT in education in Vietnam**

To facilitate further dialogue and cooperation, VVOB introduced the framework of ten dimensions of ICT in education that were identified by the Southeast Asian Ministers of Education Organization (SEAMEO, 2010). All key players have been invited to complete an online survey to share their opinion on the current status and targets for 2020 on each of these dimensions for Vietnam.

By 27 March and after 2 reminders, the online survey has been completed by 20 key players out of 34 invited and confirmed participants for the meeting on 16 March (response rate of 58.82 %).

This report provides now a description of the input received via this survey. In what follows in the paper we share on the one hand how all respondents evaluated the current status of ICT in education in Vietnam. On the other hand we list the priorities for 2020 that the respondents provided.

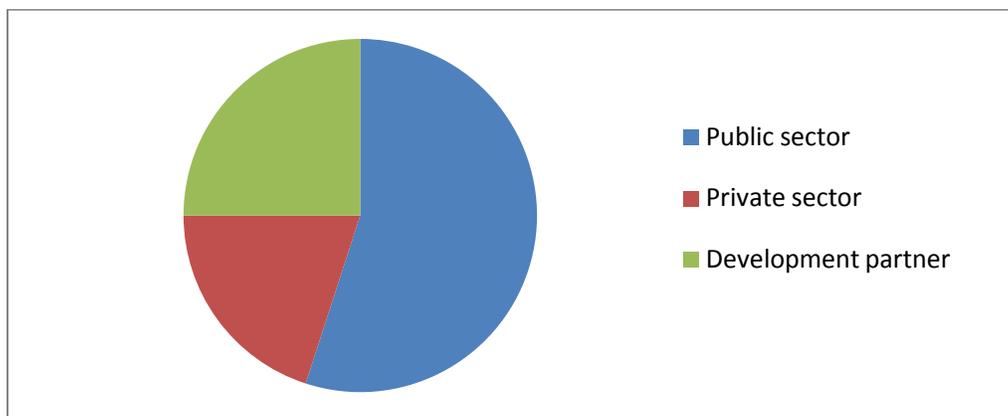
In a second survey round, all key players’ who participated in the meeting will be invited to re-evaluate their opinion related to the current status of ICT in education in Vietnam as well as to prioritize the different targets that have been identified for 2020. In addition, all other key players’ that apologized for the meeting will be invited to provide their input as well.

## 2. Findings

### 2.1. The key players group

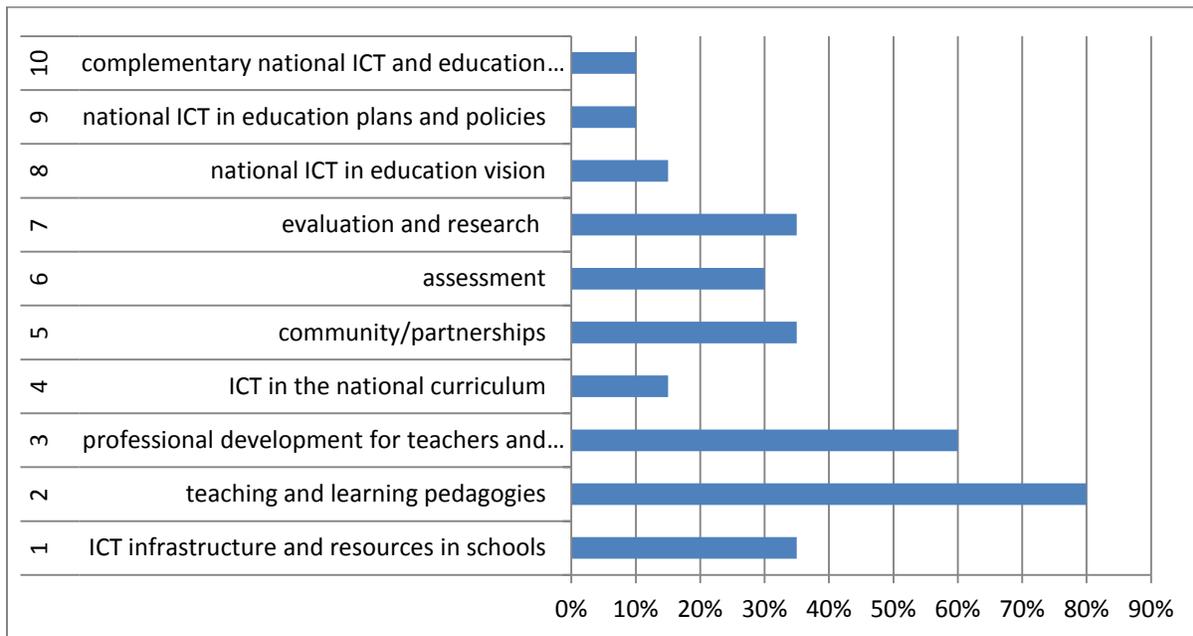
The participation list of the Key Players' meeting has been compiled by the organizers of the meeting and represents a broad representation of the network of actors in the field. From those who completed the survey, 25% indicated they are development partners while a bit more than half (55%) are from the public sector. The remaining 20% of respondents is from the private sector (see figure 1). Their occupations range from technology developer (2) and service provider (2), to educational researcher (2), lecturer (1), trainer/tutor (1) and school head, university dean or head of department (5), to policy maker (2). The remaining 5 respondents are development partners.

**Figure 1: Sector distribution of key players**



This group of key players are involved in all dimensions of ICT in education identified by SEAMEO (2010), with 80% of all respondents involved in “teaching and learning pedagogies” and 60% in “professional development of teacher and school leaders”, but also in “ICT infrastructure and resources in schools” (35%), “community/partnerships” (30%), “assessment” (30%) and “evaluation and research” (35%). Some key players are involved in “ICT in the national curriculum” (15%), in “national ICT in education vision” (15%) and “ICT in education plans and policies” (10%) and complementary national ICT and education policies (10%) (see figure 2).

**Figure 2: Distribution of key players over dimensions of ICT in education (SEAMEO, 2010)**



Even though the key players indicate more involvement in professional development of teachers and school leaders and teaching and learning pedagogies than in other dimensions of ICT in education, this group is a balanced representation of public and private actors as well as development partners in the field of ICT in education in Vietnam.

## **2.2.Evaluation of current status of ICT in education in Vietnam**

These key players provided their opinion on the current status on ten dimensions of ICT in education in Vietnam. Four stages of ICT in education are identified based on UNESCO’s model of ICT Development in Education (UNESCO, 2005): emerging, applying, infusing, and transforming. To guide the ranking, for each dimension of integration of ICT in education a description of these four stages was presented in the survey (see overview in annex 1).

For the first six dimensions we asked for the key players’ opinion on the current status in primary, secondary and higher education (see table 1). We list the main findings here (see also annex 2):

- There is a general trend that the key players perceive the status of these dimensions as more evolved in secondary education and especially in higher education than in primary education: according to most respondents, in primary education, most dimensions are at the emerging stage (1), in secondary and higher education they are at the infusing (2) or applying stage (3).
- The highest mean scores are for “infrastructure and resources” (2.53) and “teaching and learning pedagogies” (2.45) in higher education. The lowest mean scores are for

“infrastructure and resources” (1.32), “ICT in the national curriculum” (1.33) and “community/partnerships” (1.32) in primary education.

- Only for “community/partnerships” and “assessment”, one respondent believes higher education institutions are at the transforming stage. For all other dimensions in the different education levels, no key player believes this stage is achieved.

**Table 1: Minimum, maximum and mean scores on ICT in education dimensions in primary, secondary and higher education (first six dimensions)**

Dimension	Level	N	Minimum	Maximum	Mean	Median	Std. Deviation
Dimension 1: Infrastructure and resources	In primary	19	1	2	1.32	1.00	.478
	In secondary	19	1	2	1.84	2.00	.375
	In higher	19	2	3	2.53	3.00	.513
Dimension 2: Teaching and learning pedagogies	In primary	19	1	3	1.63	2.00	.684
	In secondary	19	1	3	1.95	2.00	.705
	In higher	20	1	3	2.45	3.00	.686
Dimension 3: Professional development for teachers and school leaders	In primary	19	1	2	1.53	2.00	.513
	In secondary	19	1	3	1.89	2.00	.658
	In higher	20	1	3	2.30	2.00	.657
Dimension 4: ICT in the national curriculum	In primary	18	1	2	1.33	1.00	.485
	In secondary	18	1	3	1.67	2.00	.594
	In higher	18	1	3	2.06	2.00	.725
Dimension 5: Community/partnerships	In primary	19	1	2	1.32	1.00	.478
	In secondary	19	1	3	1.68	2.00	.671
	In higher	20	1	4	2.05	2.00	.887
Dimension 6: Assessment	In primary	19	1	2	1.58	2.00	.507
	In secondary	19	1	3	1.95	2.00	.705
	In higher	20	1	4	2.20	2.00	.894

For the other four dimensions we asked for their opinion on the current status in general (see table 2). We list the main findings here (see also annex 3):

- Again there is only one respondent who believes that some dimensions are at the transforming stage: “national ICT in education policies and plans” and “complementary policies and plans”.
- All others believe that all these dimensions are maximum at the infusing stage.
- The mean score for “national ICT in education vision” is lowest (1.75).

**Table 2: Minimum, maximum and mean scores on ICT in education dimensions (last four dimensions)**

Dimension	N	Minimum	Maximum	Mean	Median	Std. Deviation
Dimension 7: Evaluation & Research	19	1	3	2.00	2.00	.745
Dimension 8: National ICT in Ed. Vision	20	1	3	1.75	2.00	.639
Dimension 9: National ICT in Ed. Policies & Plans	19	1	4	2.21	2.00	.855
Dimension 10: Complementary Policies & Plans	19	1	4	2.00	2.00	.745

The SEAMEO report is based on case studies submitted in May 2009 by ICT in education policy makers from 11 SEAMEO countries, including Vietnam. Vietnam has been identified as a “group 2” country: they are mainly at the infusing stage for most of the dimensions and most of them already have developed ICT plans and policies in education (SEAMEO, 2010). According to the report, Vietnam has three dimensions of ICT in education in the transforming stage: national ICT in education plans and policies, complementary national ICT and education policies and ICT infrastructure and resources in schools; and these may have provided the necessary and sufficient conditions for some schools to transform their ICT-mediated teaching and learning practices. The SEAMEO report (2010) further clarifies that due to the rural-urban gap and different levels of access to ICT infrastructure, there are still some parts of the dimensions that are in the applying and even emerging stage.

The current report is based on input at the beginning of 2012, from a balanced group of key players representing the public and private sector as well as development partners involved in different dimensions of ICT in education in Vietnam. The overall picture is somehow less optimistic than the SEAMEO report from 2010. Most key players do not observe that plans and policies on ICT in education or infrastructure and resources are at the transforming stage. Moreover there is an observed gap between different education levels: while, as observed by the key players, higher education institutions are mostly at the infusing stage for different dimensions, in secondary and especially primary education some dimensions are still in the applying and even emerging stage.

### **2.3. Identified priorities on ICT in education in Vietnam for 2020**

For each of the dimensions a second question was asked in the survey to list priorities or provide suggestions for realistic targets to be achieved by 2020. These were open questions that led to a large amount of input. Hereafter we present a structured summary of this input. For most dimensions, different sub-dimensions and different aspects have been addressed by the respondents. The different priorities are presented as **98 items for a next survey round** (see table 3).

**Table 3: Priorities and targets on ICT in education identified by key players in first survey round**

*Dimension 1: Infrastructure and resources*

<b>Connectivity and access to ICT in schools</b>	
1.1.	A computer lab in all schools
1.2.	Classroom computers in all schools
1.3.	Access to a computer/laptop and projector for classroom teaching in all schools.
1.4.	Internet access in classrooms in all schools
1.5.	Open resource centers in all schools with access to i.e. digital camera, scanner, printer, video camera, recorder, video conference system, subject specific software, ...
<b>Connectivity and access to ICT in HE institutions</b>	
1.6.	Wifi internet access in all HE institutions
1.7.	Learning management system in all HE institutions
1.8.	In HE institutions students bring their own device (laptop, smartphone, tablet, ...)
<b>Content and Open Educational Resources</b>	
1.9.	Digital resources for teachers and students accessible via an online portal (Open Educational Resources – OER)
1.10.	Availability of a wide range of specific software for specific subjects
1.11.	All public school books (the curriculum) are offered as e-books
1.12.	More educational applications in Vietnamese (created by Vietnamese)
<b>Digital divides</b>	
1.13.	Reduced digital divide of ICT opportunities between poor rural schools and better-off urban schools

*Dimension 2: Teaching and learning pedagogies*

<b>Teaching and learning pedagogies</b>	
2.1.	Promotion of a learner centered approach with active participation of students
2.2.	Promotion of multi-sense learning styles
2.3.	Promotion of experimental learning
2.4.	Promotion of holistic student development
2.5.	Promotion of cooperative learning
2.6.	Promotion of extra-curricular activities for holistic development
2.7.	Review curriculum to allow more autonomy for teachers and students
<b>21<sup>st</sup> century knowledge and skills</b>	
2.8.	Promotion of critical thinking, research, problem solving and decision making skills
2.9.	Promotion of creativity and initiative
2.10.	Promotion of language skills
2.11.	Promotion of collaborative learning and teamwork skills
2.12.	Promotion of self-study and self-improvement skills
2.13.	Promotion of basic ICT skills and knowledge at lower grades
<b>ICT in teaching and learning</b>	
2.14.	Application of ICT in teaching for holistic development of students
2.15.	Application of ICT for research and collaborative learning (innovation in developing social networks, school wikis, and other platforms)

2.16.	Application of ICT within and outside the school environment
2.17.	ICT to partly replace teaching staff where there is a shortage

***Dimension 3: Professional development for teachers and school leaders***

<b>ICT knowledge and skills</b>	
3.1.	Basic ICT knowledge and skills training for teachers and managers (in-service)
3.2.	Subject-specific training for teachers (in-service)
3.3.	ICT training for material developers (digital content)
3.4.	Training on ICT for active teaching and learning for teachers
3.5.	English language training on ICT in education
<b>Education innovation management skills (for educational managers)</b>	
3.6.	Management skills training on promotion of active teaching and learning methodologies
3.7.	Management skills training on promotion of 21 <sup>st</sup> century skills
<b>Modalities of professional development</b>	
3.8.	Self-managed and needs-based study for teachers with support of the school
3.9.	Thematic training package for self-study for teachers defined by MOET (in-service)
3.10.	Hands-on practice as part of professional development programs
3.11.	ICT in education guidelines and standards for teachers
3.12.	ICT in education in the curriculum for pre-service
3.13.	National ICT in education teacher exam with certification
3.14.	Learning communities (or communities of practice) for teachers (for example on Edunet)

***Dimension 4: ICT in the national curriculum***

<b>ICT knowledge and skills in the national curriculum</b>	
4.1.	Basic ICT knowledge and skills in national curriculum at all levels
4.2.	Application of ICT integrated in other subjects
4.3.	Standardized testing and certification of basic ICT knowledge and skills (for example the International Computer Driving License – ICDL)
4.4.	Classes for talented ICT students
<b>ICT to deliver the national curriculum</b>	
4.5.	Promotion of e-learning
4.6.	Promotion of blended learning (online and face to face)
4.7.	Digitalization of all textbooks
4.8.	Development of OER linked to the curriculum in all subjects

***Dimension 5: Community/partnerships***

<b>Public-Private partnerships and development assistance</b>	
5.1.	Promotion of cooperation (local and international) on ICT in education with the participation of the public and private sector and (overseas) development assistance
5.2.	Targets for annual private investment for ICT equipment in schools
5.3.	Departments in educational institutions in charge of cooperation and funding
5.4.	More focus on expanding international markets, diversification of services in ICT to

	enhance the competitiveness of Vietnamese enterprises
<b>Learning communities</b>	
5.5.	Schools have learning communities for students to exchange on learning and related issues
5.6.	Schools have learning communities for teachers per subjects for peer coaching and support
5.7.	Inter-school cooperation communities
5.8.	Online platforms (for example EDU-net) to facilitate a national community of educators
5.9.	Regional and international online learning communities for teachers and students
5.10.	Local to global learning communities on environment and sustainable development issues
<b>Community participation in education</b>	
5.11.	School as an academic resource for the community - either directly or online
5.12.	Promotion of participation of parents and communities in education (in secondary and primary education)
5.13.	Increased accountability of schools towards parents and the community
5.14.	Involvement of the community in evaluation of educational quality and change
<b>ICT supporting community participation in education</b>	
5.15.	ICT to monitor educational quality and change in schools
5.16.	Further use of ICT's to bring communities together
5.17.	Wide application of ICT in the community

### *Dimension 6: Assessment*

<b>Student portfolio assessment of competences</b>	
6.1.	Integrated portfolio assessment across subject areas
6.2.	Assessment of holistic development of students
6.3.	Competence based, formative student assessment
6.4.	Assessment in line with a competence based curriculum and activating teaching and learning pedagogies
6.5.	Different types of assessment (formative and summative assessment) for different levels of competence
<b>ICT for student assessment</b>	
6.6.	Students use multiple media to demonstrate attainment
6.7.	ICT applications for students for self regulated achievement assessment
6.8.	ICT applications for teachers for continuous assessment or final testing
6.9.	Student peer assessment (facilitated by ICT)

### *Dimension 7: Evaluation & Research*

<b>Evaluation and research on ICT in education</b>	
7.1.	Promotion of research as a basis for proper policy formulation on ICT in education
7.2.	Monitoring and evaluation of system performance parallel with an ICT in education plan (Planning, Monitoring & Evaluation)
7.3.	Formative and summative evaluation of ICT in education
7.4.	Enhanced research and development capacity of ICT in education research institutions

7.5.	Involvement of educators in action research, lesson study and/or design based research on ICT in education
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***Dimension 8: National ICT in Education Vision***

<b>National ICT in education vision</b>	
8.1.	Vision focuses on education and learning
8.2.	Vision focuses on driving changes in culture, policies and practices mediated by ICT
8.3.	Vision is in line with the current status of the economy, culture and practices
8.4.	Vision is result and output oriented rather than input oriented
8.5.	Vision is holistic, taking in consideration different factors of quality of education
8.6.	Vision on infrastructure and resources focuses on the most needy schools

***Dimension 9: National ICT in Education Policies & Plans***

<b>National ICT in education policies and plans</b>	
9.1.	Increased participation of all stakeholders in the development of policies and plans
9.2.	National policy and plan on ICT in education accompanied by a specific financial plan
9.3.	Inclusion of teacher professional development in national ICT in education policies and plans
9.4.	Comprehensive and cohesive policies and plans that assist all stakeholders in implementation
<b>ICT in education plans and policies in schools</b>	
9.5.	ICT is integral to overall school development plan
9.6.	Policies and plans developed with involvement of teachers and students

***Dimension 10: Complementary Policies & Plans***

<b>Complementary National ICT and Education Policies</b>	
10.1	National ICT in education policies start from a clear national vision on ICT in education
10.2.	The ICT in education policies complement the national ICT and education policies
10.3	Building IT skills integrated in national development strategies (e-government program, e-citizens, etc)

In addition, key players were asked to identify 3 to 10 technologies that, in their opinion, have or will have an impact on educational change in Vietnam. With technologies, it was explained, is understood the devices, applications and trends and the environment within which they operate. The following technologies have been identified (see table 4):

**Table 4: Technologies that have or will have an impact on educational change in Vietnam**

Computer and projector for teaching and learning	Virtual simulation software for practice and experiments
Software replacing teaching and learning aids in	Multimedia labs in schools

specific subjects	
One laptop per teacher	Web 2.0
Internet access in classrooms	Web 3.0
Internet access	Free (and open source) software
Smart phones	Online learning communities
Tablet computers	Connected schools
Content for mobile devices	Cloud based services
Wireless technology	Low cost, affordable computing devices (low energy consuming, small size and easy to maintain)
Content Management Systems	Ubiquitous wireless connectivity
E-learning	Open Educational Resources (OER)
Digital interactive whiteboards	Presentation applications
Electronic/digital books	Cloud computing
Educational digital games	Teleconference
Social networking	Webex (Cisco)
Electronic/digital teaching and learning resources	Virtual Machines System (VXI)
Student management software	School management systems
Electronic/digital learning logbooks/portfolio's	

### 3. Follow-up

To keep the momentum going, the idea has been introduced to initiate different working groups to address different aspects of ICT in education in Vietnam. By the end of the key players' meeting in Hanoi, key players showed a high interest in following up on this. It was discussed that the results of the survey on dimensions of ICT in education can be used to direct possible cooperation in working groups.

The most relevant input from the survey is on priorities and targets on different dimensions of ICT in education. However, it is clear that this overload of suggestions will not spear point cooperation. Therefore, in a second survey round, all key players will be invited to prioritize the different suggestions and targets. All key players will be asked to assess each of the suggestions on their relevance/importance/feasibility in the context of education in Vietnam. This will hopefully result in a more focused and concrete list of priorities that could be the starting point for cooperation between different key players. At the same time they will be asked to re-evaluate their opinion on the current status on the ten dimensions of ICT in education in Vietnam.

### 4. References

- SEAMEO. (2010). *Status of ICT Integration in Education in Southeast Asian Countries*. Bangkok: The Southeast Asian Ministers of Education Organization (SEAMEO).
- UNESCO. (2005). *Regional Guidelines on Teacher Development for Pedagogy-Technology Integration*. Bangkok: UNESCO Asia and Pacific Regional Bureau for Education.

## **5. Annexes**

### Overview of annexes:

Annex 1: Indicators of stages of ICT in education (SEAMEO, 2010)

Annex 2: Evaluation of current status of ICT in education in primary, secondary and higher education in Vietnam (first six dimensions)

Annex 3: Evaluation of current status of ICT in education (last four dimensions)

**Annex 1: Indicators of stages of ICT in education (SEAMEO, 2010)**

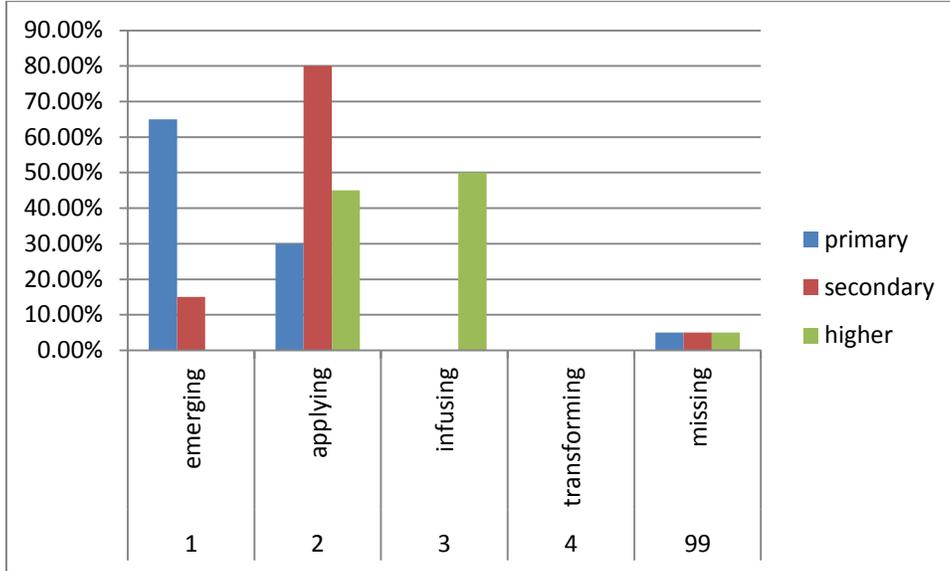
<b>Dimension</b>	<b>Emerging</b>	<b>Applying</b>	<b>Infusing</b>	<b>Transforming</b>
1-ICT infrastructure and resources in schools	Stand-alone workstations for administration. Individual classrooms. Computers and printers. Word processing, spreadsheets, database, presentation software. School administration software.	Computer lab or individual classrooms for ICT specific outcomes. Computers, printers and limited peripherals. Word processing, spreadsheets, databases, presentation software. ICT software. Internet access.	Computer lab and/or classroom computers. Networked classrooms. Intranet and Internet. Resource-rich learning centres. Range of devices, including digital cameras, scanners, and video and audio recorders. Video-conferencing. Range of subjects-oriented content. Range of subject specific software and localized digital resources accessible via the central repository system.	Whole school learning with ICT with access to technology resources and a wide range of current devices. The whole range of devices in the column to the left and web-based learning spaces. Conferencing and collaboration. Distance education. Web courseware. Student self-management software. Schools have the autonomy to manage their own infrastructure and resources. Schools share the digital resources that they have created with one another.
2-Teaching and learning pedagogies	Teacher-centred. Didactic	Factual knowledge-based learning. Teacher-centred. Didactic. ICT a separate subject.	Learner-centred learning. Collaborative.	Critical thinking. Informed decision-making. Whole learner, multi-sensory learning styles. Experimental.

<b>Dimension</b>	<b>Emerging</b>	<b>Applying</b>	<b>Infusing</b>	<b>Transforming</b>
3-Professional development for teachers and school leaders	Awareness of needs for professional development but no plan for teachers and school leaders. If a plan exists, it is not based on a needs and situation analysis.	ICT applications training. Unplanned. Personal ICT skills.	Subject specific. Professional skills. Integrating subject areas using ICT. Evolving.	Focus on learning and management of learning. Self-managed, personal vision and plan, school supported. Innovative and creative. Integrated learning community with students and teachers as co-learners.
4-ICT in the national curriculum	ICT literacy development is part of the national curriculum.	Applying ICT within discrete subjects. Use of artificial and isolated contexts.	Infusion with non-ICT content. Integrated learning systems. Authentic contexts. Problem solving projects.	Virtual and real-time contexts. ICT is accepted as a pedagogical agent & the curriculum is delivered online and face-to-face.
5-Community/partnerships	Discreet donations. Problem-driven. Accidental.	Seeking donations and grants. Parental and community involvement in ICT.	Subject-based learning community providing discrete, occasional assistance, by request. Global and local networked communities.	Broad-based learning community actively involves families, business, industry, & universities. School is a learning resource for the community – physically and virtually.
6-Assessment	Equipment-based. Budget-oriented. Discrete subjects. Didactic. Paper and pencil. Closed tasks.	Skills-based. Teacher-centred. Subject focused. Reporting levels. Moderated within subject areas	Integrated. Portfolios. Subject-oriented. Learner-centred. Multiple media to demonstrate attainment. Moderated across subject areas.	Continuous. Holistic – the whole learner. Peer-mediated. Learner-centred. Learning community involvement. Open-ended. Project-based.

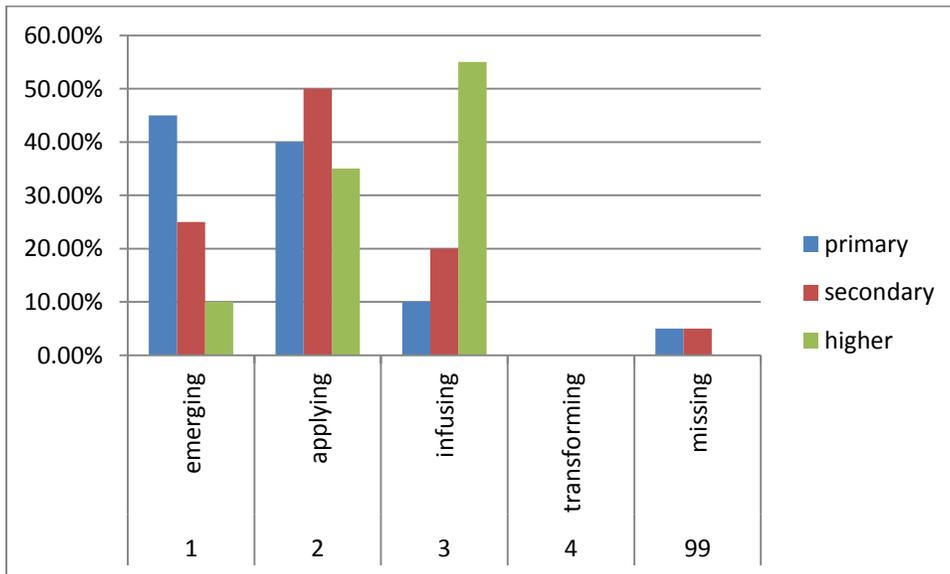
<b>Dimension</b>	<b>Emerging</b>	<b>Applying</b>	<b>Infusing</b>	<b>Transforming</b>
7-Evaluation and research	There is no evaluation and research plan in the formulation and implementation of the ICT plan.	Evaluation of the implementation of the ICT plan is summative in nature. There is no research to provide evidence-based policies.	Evaluation is both summative and formative. Research provides evidence-based policies but does not push the boundaries of existing policies and practices.	Evaluation is both summative and formative in nature. Research provides evidence-based policies and pushes the boundaries of existing policies and practices.
8-National ICT in education vision	Vision in ICT-driven with no or lack of consideration for existing culture, policies and practices.	Vision focuses on the use of ICT to support existing culture, policies and practices.	Vision focuses on driving changes in culture, policies and practices mediated by ICT.	Vision is of exemplary quality and is being studied and emulated by other countries.
9-National ICT in education plans and policies	Non-existent or ICT-driven plans and policies. No planned funding.	Limited. ICT development led by specialist. Centralized policies. Hardware and software funding. Automating existing practices.	Individual subject plans include ICT. Permissive policies. Broadly-based funding, including teacher professional development.	ICT is integral to overall school development plan. All students and all teachers involved. Inclusive policies. All aspects of ICT funding integral to overall education budget. Integral professional development.
10-Complementary national ICT and education policies	There is no or lack of linkage between the ICT in education policies and national ICT and education policies	There is a linkage between the ICT in education policies and national ICT and education policies but some of the policies are contradictory.	The ICT in education policies complements the national ICT and education policies. However, it is usually the latter that inform and/or support the former.	The ICT in education policies complements the national ICT and education policies. The policies inform and support one another.

**Annex 2: Evaluation of current status of ICT in education in primary, secondary and higher education in Vietnam (first six dimensions)**

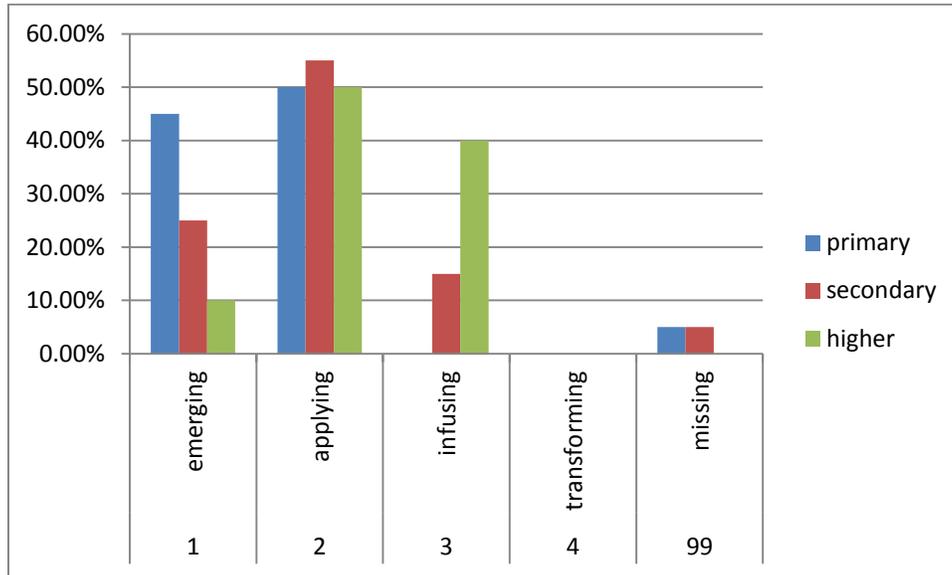
***Dimension 1: ICT infrastructure and resources in schools***



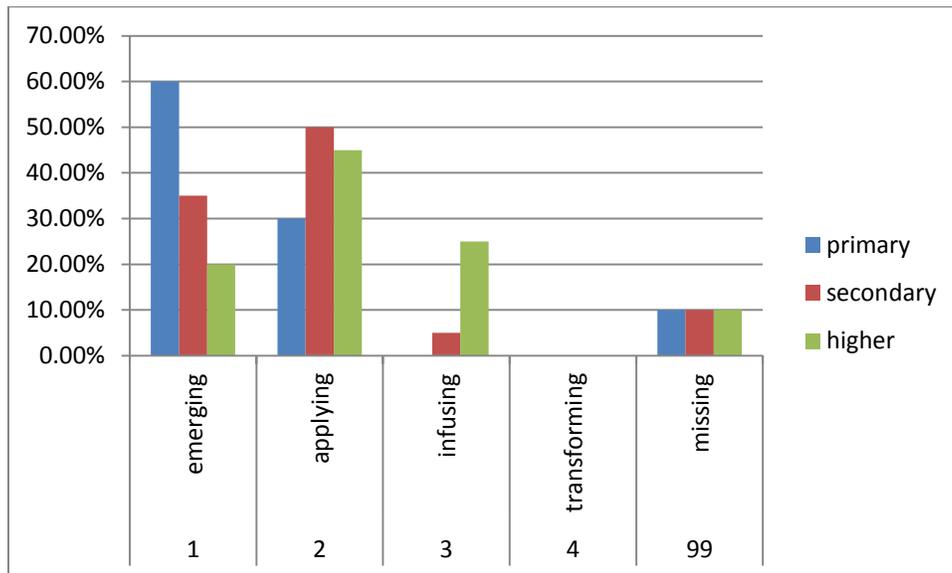
***Dimension 2: Teaching and learning pedagogies***



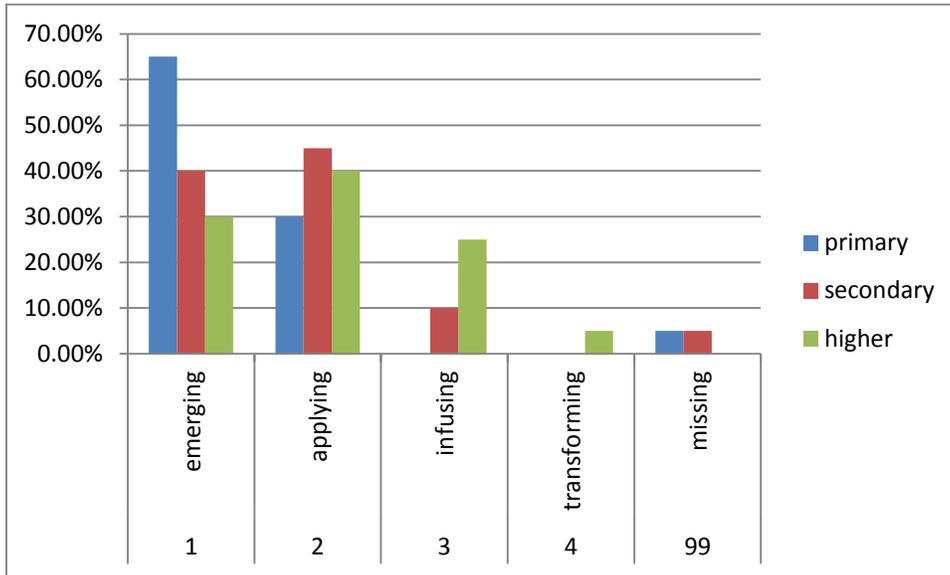
***Dimension 3: Professional development for teachers and school leaders***



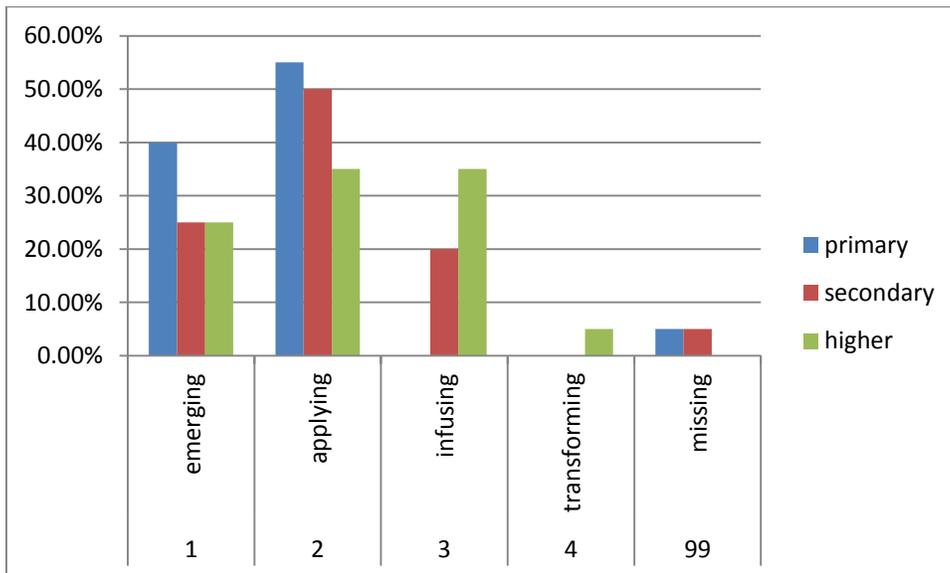
***Dimension 4: ICT in the national curriculum***



***Dimension 5: Community/partnerships***

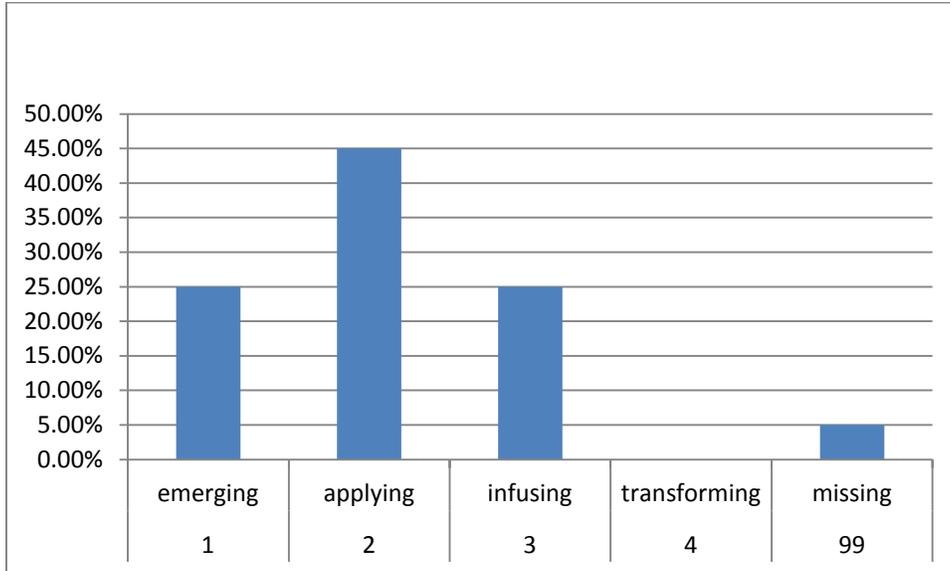


***Dimension 6: Assessment***

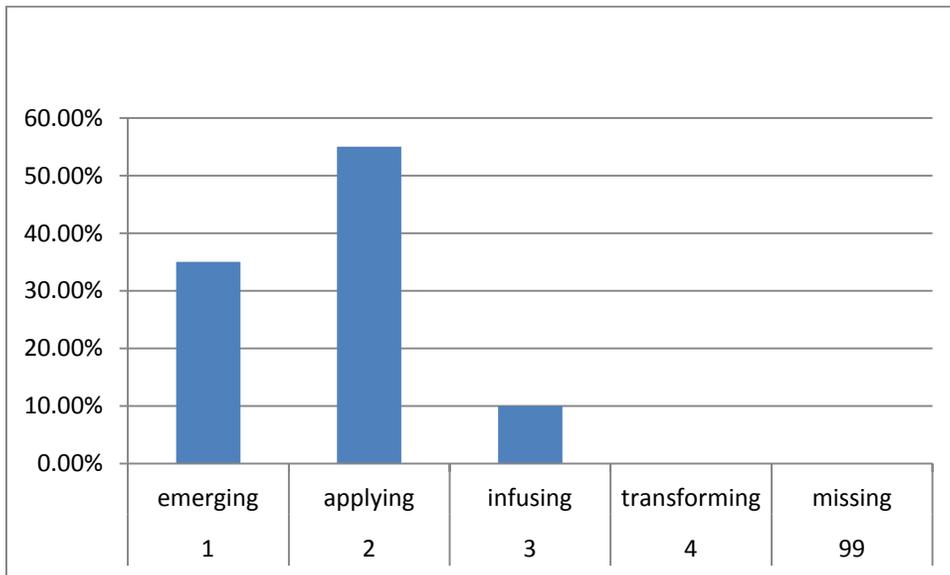


**Annex 3: Evaluation of current status of ICT in education (last four dimensions)**

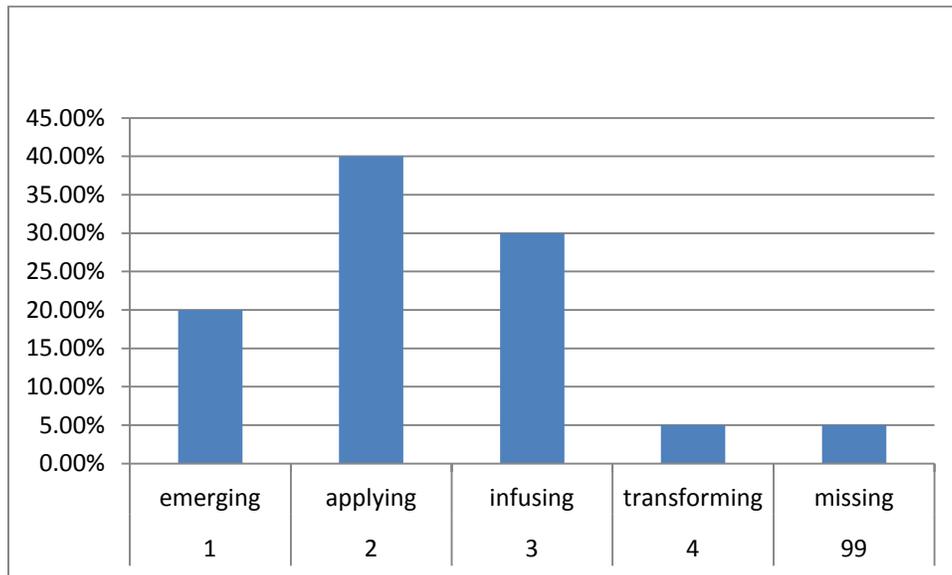
***Dimension 7: Evaluation and research***



***Dimension 8: National ICT in education vision***



***Dimension 9: National ICT in education plans and policies***



***Dimension 10: Complementary national ICT and education policies***

