This study has been initiated to support the company participating in IMAILE project.

This study concentrates on context of primary and secondary education.

Before going more in detail into the context of the research, it is important to give definitions of core terms, namely to explain what is meant under term ‘adoption’ and ‘ICT integration’ throughout the entire study.

Rangaswamy & Gupta, (2000) describes adoption as the decisions that individuals make each time that they consider taking up an innovation. Similarly, Rogers (2003) defines adoption as the decision of an individual to make use of an innovation as the best course of action available. Rogers (2003) argues that the process of adoption starts with initial hearing about an innovation to final adoption. For the purpose of this study, Rogers’ definition of adoption is used.

Earle (2002) linked ICT integration with the concept of wholeness, when all elements of the system are connected together to become a whole. For instance, the two important elements of teaching and learning which are content and pedagogy must be joined when technology is used in lesson. In other way, if students are offered series of websites or ICT tools (e.g. CD ROMs, multimedia, etc) then the teacher is not integrating ICT into teaching since he/she is not tackling the pedagogical issues. Similarly, Williams (2003) described ICT integration as the means of using any ICT tool (Internet, e-learning technologies, CD ROMs, etc) to assist teaching and learning. For the purpose of this study, Williams’ definition of ICT integration is adopted.

There has been done various of studies on explaining information and communication technology (ICT) adoption in different contexts. Moreover, several educators have proposed different models and theories for that. Among the core ones are the following:

* Diffusion of innovation
* TAM
* UTAUT, UTAUT2

All of these theories help to understand peoples’ personal factors affecting on adoption or non-adoption of ICT. Undoubtedly, personal factors are crucial to understand because despite of the nature of the context, any adoption ends up in personal adoption of ICT tool by that person(s) who is supposed to use it. But which factors else are happening to be on the way throughout the process called ‘adoption’ and which has own level of effect on final decision whether to accept and start using ICT tool in the classroom or not. Buabeng-Ando (2012) made a literature review of those studies which were done to find out factors influencing teachers’ adoption and integration of ICT into teaching. The literature review was done so that first factors which positively influence on teachers’ adoption of ICT were reviewed followed by factors which have negative effect. The summary of positive factors is presented in table 1. Identified factors have been categorized according to the framework of Sherry & Gibson (2002) who claimed that technological, individual, organizational, and institutional factors should be considered when examining ICT adoption and integration.

Table 1. Factors positively influencing teachers’ adoption and integration of ICT into teaching. Buabeng-Ando (2012).

|  |  |
| --- | --- |
| **Factors that positively influence teachers’ use of ICT** | |
| **Level** | **Factors** |
| Personal | Teachers’ attitudes |
|  | ICT Competence |
|  | Computer self-efficacy |
|  | Gender |
|  | Teaching Experience |
|  | Teacher workload |
|  | |
| Institutional | Professional development |
|  | Accessibility |
|  | Technical support |
|  | Leadership support |
|  | |
| Technological |  |
|  |  |
|  |  |
|  |  |

Table 2 collects findings of those several studies have conducted empirical research on factors (barriers) that discourage the use of ICT by teachers. These factors (barriers) have been categorized in teacher-level, school-lever and system-level barriers as suggested by Balanskat, Blamire & Kefalla (2007).

Table 2. Factors negatively influencing teachers’ adoption and integration of ICT into teaching. Buabeng-Ando (2012).

|  |  |
| --- | --- |
| **Factors that positively influence teachers’ use of ICT** | |
| **Level** | **Factors** |
| Teacher-level | Lack of teacher ICT skills |
|  | Lack of teacher confidence |
|  | Lack of pedagogical teacher training |
|  | Lack of follow-up of new |
|  | Lack of differentiated training programs |
|  | |
| School level | Absence of ICT infrastructure |
|  | Old or poorly maintained hardware |
|  | Lack of suitable educational software |
|  | Limited access to ICT |
|  | Limited project-related experience |
|  | Lack of ICT mainstreaming into school’s strategy |
|  | |
| System level | Rigid structure of traditional education systems |
|  | Traditional assessment |
|  | Restrictive curricula |
|  | Restricted organizational structure |

As it is possible to see from Buabeng-Ando (2012) work, there are other factors as well apart of personal ones.

References:

Balanskat, A., Blamire, R., & Kafal, S. (2007). A review of studies of ICT impact on schools in Europe European Schoolnet .

Buabeng-Andoh, C. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. International Journal of Education and Development using Information and Communication Technology, 8(1), 136.

Earle, R.S. (2002). The integration of instructional technology into public education: Promises and challenges. ET Magazine, vol. 42, no. 1, pp. 5-13.

Rangaswamy, A. and S. Gupta. 2000. Innovation adoption and diffusion in the digital environment: some research opportunities.

Sherry, L., & Gibson, D. (2002). The path to teacher leadership in educational technology. Contemporary issues in technology and teacher education, vol. 2, no. 2, pp. 178-203.

Williams, M. D. (2003). Technology integration in education. In Tan, S.C. & Wong, F.L. (Eds.), Teaching and Learning with Technology, pp. 17-31: An Asia-pacific perspective. Singapore: Prentice Hall.