

# Media Usage by Thai International Students – An Empirical Survey

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**Abstract.** The rise of the web 2.0 led to fundamental changes in the media usage behavior of students in higher education. As participants of international programs adopt new technologies very early, changes in media usage behavior should occur first among this group. To investigate these changes, a representative survey was carried out at Mahidol University International College (MUIC) in Bangkok, Thailand: using a fully standardized print questionnaire, 542 students were asked 143 questions about their media use for learning and close-by topics. Statistical analysis of the data included analysis of variance and comparing mean values by creating rankings of the different media services. It was aimed to find out, which services are used to what extent. It also was of interest if - due to their cultural background - Thai students prefer social and formal media services and on the other hand are averted to self-controlled learning with media. The results showed, that web 2.0-media such as Google, Instant Messengers and Youtube are most often used by students not only during free time but also for learning. At the same time, traditional learning media such as printed handouts from teachers still form basic pillars in the learning environment of the students. Thai students seem to use social media for learning on a high level. But they also accept information media such as Wikipedia or online dictionaries, which support informal self-learning. The survey is part of an international research project. Currently 13 surveys are being carried out throughout Europe and Asia.

**Keywords:** media, e-learning, higher education, tertiary education, web 2.0, learning media

## 1. Introduction

The dissemination of new computer technologies and online services into tertiary education has led to constant changes in students' learning environment, influencing both their learning and study behaviour. Media usage for learning in this research includes e-learning, digital services and the use of online information. It also includes the more familiar use of print media and class attendant materials. Although there are papers focusing on the effect of e-learning or other digital technology, there have been no studies in Thailand or in Asia conducted that measure the current learning behaviour of students using a wide range of media, traditional and digital. Before investing more in digital technology, university administrators should first understand student learning behaviour within the current media environment.

Web 2.0 has increased the direct interactions between users (O'Reilly, 2005), and college students are heavy users of external services like Google, Wikipedia, and Facebook during their free time, as well as for their studies (Smith et al., 2009; Grosch & Gidion, 2011). Mobile broadband internet access and the ownership of netbooks and smartphones have also fuelled the unparalleled Asian boom of the use of the social web by undergraduate students. This unique ubiquitous access to the internet has opened many avenues for educating the newer Google generation.

University students have gradually accepted e-learning platforms in recent years, but not all services are accepted equally. Students generally tend to refrain from technologies that require more effort, preferring easy-to-use e-learning systems (Kvavik & Caruso 2005, p. 93). A key success factor of e-learning successful adoption has been the quality of the services (Ehlers, 2004). The researchers in this paper define quality from the subjective point of view of the student, what they find useful and use often. This learning-related media

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usage is embedded in a certain environment that and influenced by various external and personal or internal factors.

During the last decade a rapid diffusion of information technology into Thai society has taken place, especially affected young and well-educated people. Grafting e-learning into the Thai education system is one of the top strategic goals of the Thai government (Siritongthaworn & Krairit, 2006).

The research was conducted at Mahidol University International College (MUIC), a faculty of Mahidol University, one of the leading Thai universities and well known for medicine and science. MUIC is an urban liberal arts college in Bangkok, and the medium of instruction for all classes is in English. MUIC current has over 3,000 students, of which 15 percent come from 45 different countries. The college offers over 20 undergraduate degrees and two masters programs. Because the students speak and write fluently, they were some of the first students in Thailand that switched from Hi5, an early social service that was popular in Thailand, to regularly use Facebook before it included Thai language. Because MUIC students tend to come from the middle to the more affluent levels of Thai society, almost all of the students have access to laptops, netbooks, tablet computers, and smart phones. These students are early adopters of new technology.

## 2. Objectives

The purpose of the media survey was to explore and measure the use of media for learning at MUIC from the students' perspective. It was also of importance how the different media services are related to each other. The following questions about Thai undergraduate students were of special interest:

- Which services are often used and which least often?
- How satisfied are students with the different media services?
- Which media are accepted by the students and which are not?
- Do Thai students prefer social and formal media services?
- Are they averted to self-controlled learning with media, meaning learning on their own through media library catalogues, Wikipedia, Google web search, information search, learning at home using internet?

## 3. Methods

The survey used the methodology developed during the KIT media survey in 2009 (Grosch & Gidion, 2011) in that media acceptance was measured of 48 media services by creating a mean average of both usage frequency and satisfaction. Usage frequency reflects acceptance in that if a service is used often, it is well accepted. If a media is used infrequently, then it has not been well received or "accepted" as a technology. Measuring satisfaction was based on Siritongthaworn & Krairit's statement that "satisfaction is widely accepted as a desirable outcome of any product or service experience (2006)." It is a central category of the measurement of quality regarding the use of a product such as media services.

The survey instrument was derived from the KIT 2009 print questionnaire. It was translated from German to English and adapted to the specific situation at MUIC and of the education system in Thailand. The modified and translated version was validated in a pretest which also led to several changes. In January 2011, 542 samples were collected in different classes and on MUIC campus. The data were transferred into a database and later on analyzed using Excel and SPSS.

## 4. Results: Media Usage of Students

The usage frequency and satisfaction values were used to calculate media acceptance ranking of the surveyed services. The questionnaire for the 48 media services asked both "how often do you use the following services for study?" and "how satisfied are you with the following services for studying?"

Table 1: usage frequency, satisfaction and acceptance ranking values: 0 means very low or no acceptance, satisfaction, or frequency of use; 4 means maximum acceptance, satisfaction or frequency of use.

	Acceptance				Frequency				Satisfaction			
	Rank	M	SD	N	Rk.	M	SD	N	Rk.	M	SD	N
Google search	1	3.50	0.76	507	1	3.63	0.78	526	1	3.37	0.99	509
Printed handouts from teacher	2	3.08	0.85	500	2	3.15	1.04	520	4	3.01	1.00	509
Computers (overall)	3	3.07	0.84	521	3	3.08	0.96	525	2	3.04	1.00	525
Online dictionaries	4	2.98	0.98	507	4	2.92	1.17	523	3	3.03	1.10	513
Notebooks	5	2.90	0.98	384	6	2.69	1.28	437	6	2.95	1.07	409
E-mail accounts not from university	6	2.89	1.07	483	5	2.79	1.37	519	7	2.91	1.19	490
Instant Messengers	7	2.64	1.02	490	14	2.25	1.36	522	5	2.99	1.10	496
Video sharing websites	8	2.64	1.10	470	9	2.51	1.34	521	9	2.69	1.22	477
Social networks	9	2.59	1.19	473	11	2.36	1.44	521	8	2.73	1.26	479
Computer labs on campus	10	2.58	0.91	471	8	2.53	1.18	524	12	2.59	1.11	514
Wikipedia	11	2.54	1.03	489	7	2.56	1.16	521	17	2.49	1.19	496
Dictionary software on computer	12	2.51	1.03	507	18	1.99	1.50	523	10	2.62	1.21	476
Print-version textbooks	13	2.49	1.03	474	12	2.31	1.27	514	11	2.60	1.18	488
Online slides from teacher	14	2.47	0.99	480	13	2.29	1.29	518	13	2.58	1.07	488
Campus Wi-Fi	15	2.41	1.07	505	10	2.48	1.27	526	20	2.32	1.29	508
Google Books	16	2.40	1.09	412	21	1.96	1.38	512	14	2.54	1.19	422
Word-processing	17	2.40	1.09	418	17	2.12	1.43	475	15	2.53	1.13	448
Working with own notebook own campus	18	2.40	1.04	485	15	2.21	1.30	521	16	2.52	1.16	492
Generating presentations	19	2.33	1.04	470	16	2.19	1.32	515	19	2.38	1.09	483
Online lecture notes and journals from teacher	20	2.23	0.96	460	20	1.96	1.24	514	18	2.40	1.07	472
Going to the library	21	2.16	1.04	482	19	1.98	1.18	516	22	2.30	1.15	494
E-learning as part of the class	22	2.07	0.96	484	22	1.93	1.13	521	27	2.14	1.15	489
Netbook	23	2.02	1.14	275	33	1.41	1.39	394	21	2.31	1.23	301
Wikis with active participation as part of the class	24	2.00	0.96	453	23	1.84	1.13	506	29	2.04	1.15	466
E-textbooks	25	1.96	1.04	426	25	1.64	1.29	509	25	2.15	1.18	441
Print-version journals	26	1.90	1.01	425	28	1.46	1.23	499	23	2.22	1.16	437
On-line services of the university/faculty library	27	1.89	0.93	443	26	1.55	1.19	515	24	2.16	1.12	450
Newsgroups, internet forums	28	1.87	0.98	474	24	1.68	1.16	514	33	1.99	1.13	485
Print-version technical reference books	29	1.86	0.97	400	29	1.44	1.18	486	26	2.15	1.18	420
E-version journals	30	1.84	1.09	404	32	1.42	1.31	487	30	2.04	1.20	423
University website	31	1.81	0.88	493	27	1.48	1.09	519	28	2.11	1.07	501
Interactive online tests/self-tests	32	1.80	0.98	403	31	1.43	1.20	516	35	1.98	1.18	409
On-line materials from other universities than MU/MUIC	33	1.78	1.00	445	30	1.43	1.21	510	32	2.02	1.18	459
E-Reader	34	1.66	1.13	249	40	1.03	1.25	393	38	1.94	1.29	277
E-learning platform Moodle	35	1.66	0.94	355	34	1.27	1.13	471	44	1.84	1.09	373
Virtual class in real-time	36	1.66	1.08	347	42	1.00	1.26	492	31	2.03	1.27	366

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E-version technical reference books	37	1.63	0.98	373	36	1.18	1.16	477	40	1.91	1.17	394
Web portal for online student web services	38	1.62	0.85	410	35	1.20	1.07	489	36	1.97	1.01	424
Twitter	39	1.61	1.18	369	46	0.93	1.28	513	34	1.98	1.35	375
Recorded lectures (audio, video)	40	1.60	1.06	383	41	1.01	1.21	507	37	1.97	1.29	400
Social bookmarking	41	1.59	1.04	291	45	0.98	1.21	438	43	1.89	1.22	307
Learning software	42	1.58	0.88	430	37	1.14	1.03	506	39	1.93	1.12	444
Online exams	43	1.56	0.99	403	39	1.06	1.11	495	41	1.90	1.25	421
On-line services of other libraries (not university)	44	1.50	0.93	387	44	0.98	1.15	511	42	1.89	1.14	397
University e-mail account	45	1.49	1.04	411	38	1.12	1.20	510	46	1.70	1.22	424
Virtual class in non-real time	46	1.46	0.96	335	48	0.82	1.07	484	45	1.81	1.21	353
Bibliographic software	47	1.45	0.97	310	47	0.93	1.17	455	47	1.67	1.11	338
Other E-Learning platform (not Moodle)	48	1.42	0.93	315	43	1.00	1.03	454	48	1.65	1.09	337

The results show strong preference and acceptance for Google web search and printed hand-outs from teachers, followed by computer devices, online dictionaries and several social media services. Internal e-learning-services, which require a high effort, show extremely low acceptance values. The results are similar to KIT 2009 survey (Grosch&Gidion, 2011, p. 63 et sq.) except that MUIC students tend more to formal use of media that is given and encouraged by lecturers, while KIT students show a higher acceptance of informal media, exploring and learning on their own. This tended to reflect what Pagram&Pagramsaid, that Thai students tend to rely more on what lecturer teach or recommend instead of what students learn on their own (2006, p. 4). There are several gaps of difference between usage frequency and satisfaction. For example, frequency of use of Wikipedia ranks 7<sup>th</sup> but only 17<sup>th</sup> in satisfaction of the service.

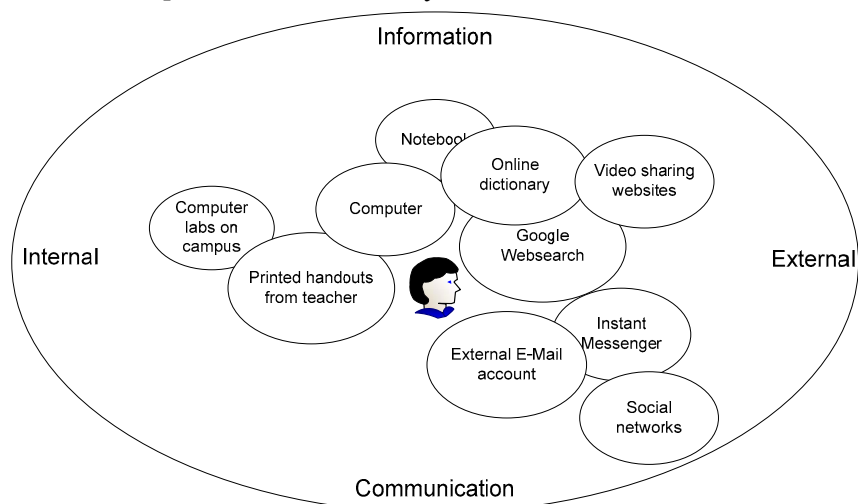


Figure 1: the top-ten accepted media services of MUIC students

When comparing internal and external services, except for printed hand-outs from lecturers MUIC students tend to prefer external services for gathering information as well as for communicating.

The usage frequency of the various media services correlates with their usage satisfaction (all media services  $p < 0.001$ ). The Spearman correlation values reside between 0.652 (online dictionaries) and 0.296 (online services of other libraries than university library). External services show overall higher correlations

between usage frequency and satisfaction than internal services. Information services show stronger correlations than e-learning-services. The correlation values overall lies in the same range asin the KIT 2009 survey.

## 5. Discussion

The results fit to the overall terrain of the research landscape. For example MUIC students prefer easy-to-use media instead of e-learning-services which need a certain effort to use, like virtual learning scenarios or learning platforms. The use of mobile computing devices is high, like in other countries. The survey led to the overall impression that MUIC students use a broad variety of media services on an intense level. Thai culture tends to have teacher-centered learning and be more focused on group than the individual, MUIC students use informal learning services slightly less than Germany students but still at a high level. The overall cultural influence could be less than assumed when it comes to media usage because of a developing global media usage culture, where university students use digital media in the same fashion, regardless of country. Broadening this research to include more surveys from other Thai undergraduates and also extending it to other Asian countries will clarify if the ranking of acceptance of media of students is really similar worldwide.

## 6. References

- [1] U.D. Ehlers. *Quality in ELearning from a Learner's Perspective. European Journal for Distance and Open Learning*. 2004. [http://www.eurodl.org/materials/contrib/2004/Online\\_Master\\_COPs.html](http://www.eurodl.org/materials/contrib/2004/Online_Master_COPs.html). Last accessed May 7, 2010.
- [2] M. Grosch, G. Gidion. *Mediennutzungsgewohnheiten im Wandel - Ergebnisse einer Befragung zur studiumsbezogenen Mediennutzung* (German language). KIT Scientific Publishing, 2011. <http://digbib.ubka.uni-karlsruhe.de/volltexte/1000022524>. Last accessed October 4, 2011.
- [3] R. Kvikvik & J.B. Caruso. *ECAR Study of Students and Information Technology, 2005: Convenience, Connection, Control, and Learning*. 2005. <http://www.educause.edu/ers0506>. Last accessed November 16, 2010.
- [4] T. O'Reilly. *What is the Web 2.0?: Design Patterns and Business Models for the Next Generation of Software*. 2005. <http://www.oreilly.de/artikel/web20.html>. Last accessed May 24, 2011.
- [5] S. Siritongthaworn & D. Krairit. *Satisfaction in e-learning: the context of supplementary instruction. Campus-Wide Information Systems*. 2006, 23 (2), 2006, 76-91. [www.emeraldinsight.com/1065-0741.htm](http://www.emeraldinsight.com/1065-0741.htm) Last accessed June 17, 2011.
- [6] S.D. Smith, G. Salaway, & J.B. Caruso. *The ECAR Study of Undergraduate Students and Information Technology, 2009*. Educause, 2009. <http://www.educause.edu/Resources/TheECARStudyofUndergraduateStu/187215>. Last accessed November 17, 2010.