International Conference on Innovation Challenges in Multidisciplinary Research & Practice, 13 -14 December 2013, Kuala Lumpur, Malaysia.

ESAP COMPETENCIES FOR MALAYSIAN ENGINEERING UNIVERSITIES' EDUCATORS: A CONCEPTUAL FRAMEWORK

Nor Yazi Hj Khamis[1], Supyan Hussin[2] and Nor Fariza Mohd Nor[2]
[1]Centre for Modern Languages & Human Sciences, Universiti Malaysia Pahang.[2]School of Language Studies & Linguistics, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia
Correspondence: yazi.khamis@yahoo.com

ABSTRACT
This study proposes a conceptual framework in identifying specific competencies for English for Specific Academic Purposes (ESAP) ESL educators teaching at engineering universities. The increasing demand for effective language and communication skills in engineering fields has prompted the need of quality ESAP educators. However, few studies specify on finding the required competencies for the educators. Structured by three elements from the Malaysian Teacher Standards (2009) i.e. Values, Knowledge and Skills to define the competencies, the framework is supported by the ESP Learning Centred Approach (Hutchinson & Waters, 1987) and Critical EAP Theory (Benesch, 2001). Three international frameworks, the Professional Service Standards for ELT (Walker, 2011), BALEAP TEAP Competency Framework (BALEAP, 2008) and ESP/EAP characterisations (Hyland, 2007), were adapted in identifying the competency items for the educators. The study proposes mixed methods of Delphi and survey techniques. The proposal aims to elevate the educators' quality teaching and professional standards.

Keywords: English for Academic Purposes/English for Specific Academic Purposes (EAP/ESAP), ESL educators' competency, engineering education

1. INTRODUCTION
The pervasive needs of effective communication skills in engineering have prompted the need of quality English for Academic Purposes or English for Specific Academic Purposes (EAP/ESAP) educators. The teaching of ESAP focuses on enhancing learners' language and communication skills in learning engineering content and in fulfilling institutional expectations. However, the crux for some Malaysian ESL engineering learners is that to perform in the field means acquiring the content knowledge while simultaneously contending with the language difficulties. It is demotivating especially to the less proficient English learners and becomes even more excruciating after years of learning the language. The engineering learners must be able to show their understanding in the discipline language to enable participation in the discipline community. This is a complicated situation for the learners and a challenge to ESAP educators in making learning possible.

Research in this area especially the local ones are mainly disposed towards learners' effective communication skills; studies on EAP/ESAP educators' encompass general discussions. Existing studies on EAP and engineering are disposed toward learners' circumstances like by Atef and Munir (2009) and Indra Devi and Teh Zanariah (2011). A number also focus on investigations of learners' corpora (Ward, 2009) whereas, studies concerning language in the engineering field are more concerned with effects of communication skills on engineering learners and professions (Azami et al., 2009; Hafizoah & Fatimah, 2010). This is to say that though EAP and engineering related studies are common, investigations on EAP/ESAP educators are in short supply. Studies on EAP educators local and abroad (Alexander, 2012; Mechraoui, Noor, Ibrahim, Muhamad, & Malek, 2013; Muhamad, Shah, & Ibrahim, 2013; Wong & Thang, 2008) discuss the educators' challenges in general.

The insufficient empirical evidence, especially concerning non-native ESL EAP educators teaching and learning has exerted some queries on the educators' knowledge and skills. A study on educators' perception of EAP courses by Wong and Thang (2008) is the local verification on the need of this study. The study identified several mismatches between instructions and assessments in the EAP courses taught. The study has put forward a glaring recommendation on the need of the educators to undergo EAP related training. Thus, this study aims to

conceptualise a competency framework for Malaysian ESL EAP educators teaching at engineering universities guided by a research question that is what are the specific competencies for ESL EAP educators teaching at Malaysian engineering universities based on the three elements of Malaysian Teacher Standards (MTS) and existing literature (adapted frameworks)?

The Teaching of English for Academic Purposes and English for Specific Academic Purposes Approaches

Under English for Specific Purposes (ESP), EAP, which is in contrast with English for Occupational Purposes (EOP) generally concerns with formal academic contexts. Hyland (2007) presents five EAP characterisations to differentiate the approach from other ELT approaches i.e.

1. the study of communication, not language
2. the role of teacher as researcher
3. the importance of collaborative pedagogies
4. the centrality or importance of language variation
5. the view that language represents broader social practices

The teaching of EAP is specified in two sub divisions i.e. English for General Academic Purposes (EGAP) and ESAP (Dudley-Evans & St John, 1998). EGAP focuses on common academic skills thus, often regarded as the lower level of EAP. ESAP, on the other, emphasises on "higher order skills, learners' development and authentic texts and features" (Carkin, 2005, p. 85) in learning the language across disciplines. Figure 1 presents ESP hierarchy with examples of courses (Clapham, 2000) and the study focus.

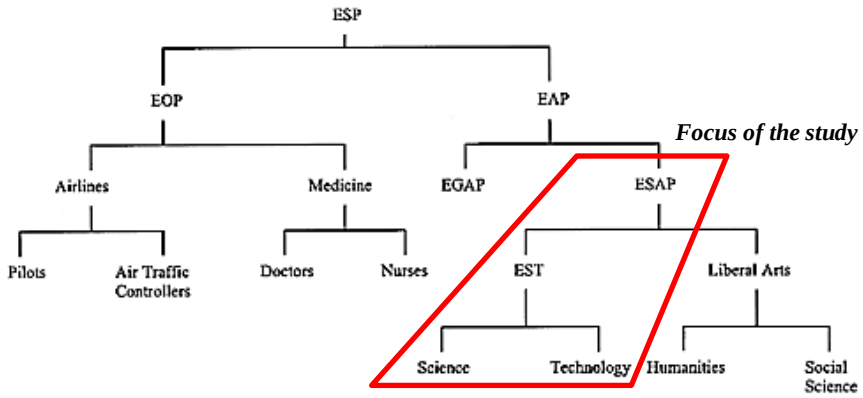

Figure 1 English for Specific Purposes (ESP) hierarchy (Clapham, 2000)

This study concentrates on ESAP-EST which has evolved and recognised to comprise all English language studies and teaching and learning activities and usage in scientific and technical fields (Orr, 1995). Hence, ESAP is regarded as a suitable approach for the teaching and learning of the skills to engineering learners. The terms EAP and ESAP are used interchangeably in this study.

The Needs of English for Specific Academic Purposes (ESAP)

Hyland (2006) insists that the need of ESAP is based on concrete theoretical reasons. The most significant argument is that each discipline has its "own ways of crafting arguments to reflect their ideas about what is of value and how it should be communicated" (Basturkmen, 2012, p. 5). The argument is supported by several EAP researches that have extended into various disciplines, highlighting the importance of accommodating to learners' specificity particularly in the context of this study for engineering learners. In an identical context, Kaewpet (2011) findings concurred on the need of ESAP in engineering universities especially when dealing with ESL engineering learners who possess low English proficiency. The studies indicated a strong need to cater specifically to the actual needs of ESP courses for engineering learners rather than focusing on English in general. The findings were consistent with the notion that "the problems are unique to specific learners in specific contexts and thus must be carefully delineated and addressed with tailored to fit instruction" (Belcher, 2006, p. 135).

Basturkmen (2012) identified the low interest in EAP because learners lacked of time to study EAP. Hirsh (2007) thus, suggests the course to be "credit-bearing components of a (learner's) program of study, designed and delivered at the faculty or program level" (p. 204) for a more effective implementation. Also, with the emphasis on needs analysis, the results from entrance tests like IELTS and TOEFL have been found to be inadequate for certain disciplines. This brings to some developments of specific tests to assess specific language criteria required by certain disciplines for a more focused EAP course or curriculum design. These connote EAP contextualisation in content discipline that is, ESAP course of the learners' selected field of studies.

The Higher Education (HE) EAP/ESAP Educators' Challenges

The challenges faced by most EAP/ESAP educators are related with the roles of the educators in teaching the language in other discipline. Alexander (2012) believes that the teaching of EAP requires more of educators' skills, abilities and experiences than in Communicative Language Teaching (CLT). Hutchinson and Waters (1987) distinguish the role of ESP/EAP educators from the General English educators by highlighting the need of ESP/EAP educators to possess some knowledge in specific field terminology. Kaewpet (2011) specifies ESL educators to at least possess knowledge of technical terms and a general scope of engineering work to be able to teach the learners effectively.

Nevertheless, to develop EAP/ESAP skills and abilities are not without effort and few educators have the time to study the language of content disciplines. The teaching necessitates EAP/ESAP strenuous effort particularly when the language is not given enough importance in contrast to the engineering content (Gupta, 2013). Slater and Mohan (2010) contend that interdisciplinary work is often impossible to attain and "results in the subordination of the E(S)AP…to more prestigious disciplinary" (Morgan, 2009, p. 87). The relegation of EAP/ESAP educators' role is labelled by Raimes (Hyland, 2006) as the 'butler stance' and is considered "deprofesionalise" (Hyland, 2006, p. 10) to most language educators. Collins, Li, and Cheung (2000) also reported that most communication courses were often lowered to minimal priority by engineering faculties mainly because the courses were often disconnected from the engineering world.

The emergence of content based (as opposed to skill based) EAP/ESAP courses elicits the issue of which types of skills and knowledge as language specialists are necessary for EAP/ESAP educators. The issue is described as intimidating (Belcher, 2006) as EAP/ESAP educators are "lack of training, expertise and confidence to teach subject specific convention" (Hyland, 2006, p. 10). The dealing with content areas also lead EAP/ESAP educators to face 'subject knowledge dilemma' (Wu & Badger, 2009) because the educators are imposed with unpredicted issue related to content knowledge and unfamiliar disciplines apart from the need to engage with the specialist disciplines language. Some EAP/ESAP educators even faced tension in their effort to prove they were capable of coping with content disciplines (Melles, Millar, Morton, & Fegan, 2005).

The Importance of Language and Engineering Interdisciplinarity

Numerous studies in engineering contexts have highlighted the importance of communication skills. Sageev and Romanowski (2001) found the importance of the skills in "differentiating good engineers from the packs" (p. 689). Reave (2004) concurred that the "technical knowledge is a given, but communication skills are the true differentiators" (p. 483) for engineers' career advancement and promotion. It is therefore foreseen that a deficiency in the communication skills may not only exacerbate the engineering learners' learning process, it encumbers their personal and professional development (Azami et al., 2009). Additionally, the implementation of Outcome Based Education (OBE) in engineering education has compelled engineers' effective skills of communication, apart from the technical competence (Felder, Brent, & Prince, 2011). Martin, Maytham, Case, and Fraser (2005) assert that OBE has been designed to produce graduates that better meet the needs of industry. For that, higher institutions have "assumed the responsibility of adequately developing their learner's non-technical skills for use in the workplace" (p. 168). Hence, a concerted effort must be devised to provide the learners with opportunities to develop the skill along with the technical ones.

Overton (2003) vouches for embedding the skills within a discipline context or interdisciplinary approach as the ablest way to 'sell' skills. EAP/ESAP is an approach that supports an interdisciplinary course because it espouses learners' individual goal and content

area curriculum through the course needs analysis. The effect of interdisciplinarity reckons to benefit the learners' engagement, encourage effective thinking, generate multiple perspectives and motivate learners to learn (Lattuca, Voigt, & Fath, 2004) the language using engineering contexts. The move affords more opportunities for incorporation of the discipline and allows integration of the skills and content to take place more effectively (Collins et al., 2000). Thus, educators from both fields should strive to achieve mutual understanding and cooperation in providing engineering learners "adequate direction and feedback for the communication tasks of the profession" (Reave, 2004, p. 482). The educators are also encouraged to be reflexive in quests for quality teaching that work best in giving progressive impact on learners' perception and optimising the learning of both. This will apparently highlight EAP educators' role and status in the content discipline. Therefore, the tenet of the study lies in enhancing EAP educators' competencies in supporting ESL engineering learners' learning of the language and communication skills.

The Conceptual Framework of the Study

The study is supported by the ESP Learning Centred Approach by Hutchinson and Waters (1987) and Critical EAP theory (Benesch, 2001) in substantiating to the importance of learning context and EAP educators' competencies in teaching the language in content discipline. The educators' competencies are operationalised using the three principles of Malaysian Teacher Standards (Education, 2009) i.e. Professional values, Knowledge on subject matters and Skills of teaching and learning that form as the elements for the framework. The elements are fortified with identified literature namely Professional Service Standards for ELT (Walker, 2011), Competencies for Teachers of English in Engineering Colleges (Venkatraman & Prema, 2007) and British Association of Lecturers in English for Academic Purposes Competency Framework for Teachers of English for Academic Purposes (BALEAP, 2008) to form as the educators' competency items respectively.

The proposed framework is also influenced by important criteria and requirements of governing bodies. The Board of Engineering, Malaysia (BEM) and the Engineering Accreditation Council (EAC) requirements instigate emphases on competency development to all educators teaching in the field. The enhancement is also part of teaching at universities requirement by the Malaysian Quality Assurance (MQA, 2011), Department of Higher Education Malaysia. Figure 2 illustrates the conceptual framework of the study that comprises several underpinning theories, frameworks and relevant documents.

There are currently four MTUN universities also known as 'Focus Universities' with niche areas of engineering and technology i.e. Universiti Malaysia Pahang (UMP), Universiti Teknikal Malaysia (UTeM), Universiti Malaysia Perlis (UniMaP) and Universiti Tun Hussein Onn Malaysia (UTHM). The universities whose task is to prepare learners for the engineering professions offer mostly English-medium engineering and technical programmes. The language is utilised as a medium of instruction in most pedagogical activities which highlight its importance for the ESL engineering learners' academic and professional purposes.

The ESP Learning Centred Approach

The ESP Learning Centred approach by Hutchinson and Waters (1987) emphasises language teaching that centres on learning. The concern has always been on 'how people learn' i.e. looking at the process how learners use the knowledge and skills they acquired in making sense new information. It is an approach that depends on learners' purposes for learning and in the case of learning English in other fields, the focus is on helping learners to assimilate and maximise learning of their specialist courses. The teaching then becomes more focused where all decisions are related with learners' specific contexts. This subject specific driven teaching and learning approach expects ES(A)P educators to have some knowledge of targeted content discipline so that learners' learning is continuously promoted on the ground of two reasons, relevancy and familiarity. The centrality on learning justifies the distinct requirements in the knowledge and skills not only between General English and ESP educators, also between EAP and ESAP educators of specific discipline.

The Critical EAP Theory

Benesch (2001) questions the tenet of EAP needs analysis (NA) when the educators are passively consenting rather than contributing in developing interdisciplinarity courses,

adapting too easily with learners' discipline content, "perpetuating a subordinate role to content discipline educators" (p. 39). Carkin (2005) adds that "the primacy and narrowness of faculty perceptions surrounding ESL learners' performance along with the unequal power relations" (p. 88) expect EAP educators not to question the practicality of pedagogical activities conducted. This reflects an inferior rank of EAP educators in content disciplines. Thus, the theory urges EAP educators to be less 'accommodating' in practicing content and language integration of EAP. The theory introduces the "complementary duality" (Morgan, 2009, p. 86) of 'critical needs' and 'right analysis.' The two prepare EAP educators for the unpredictable and unfamiliar demands of HE second language learning and encourage learners' inclusion as members of academic community. The theory engages EAP educators with power related issues in augmenting their role as the language specialists in content discipline contexts

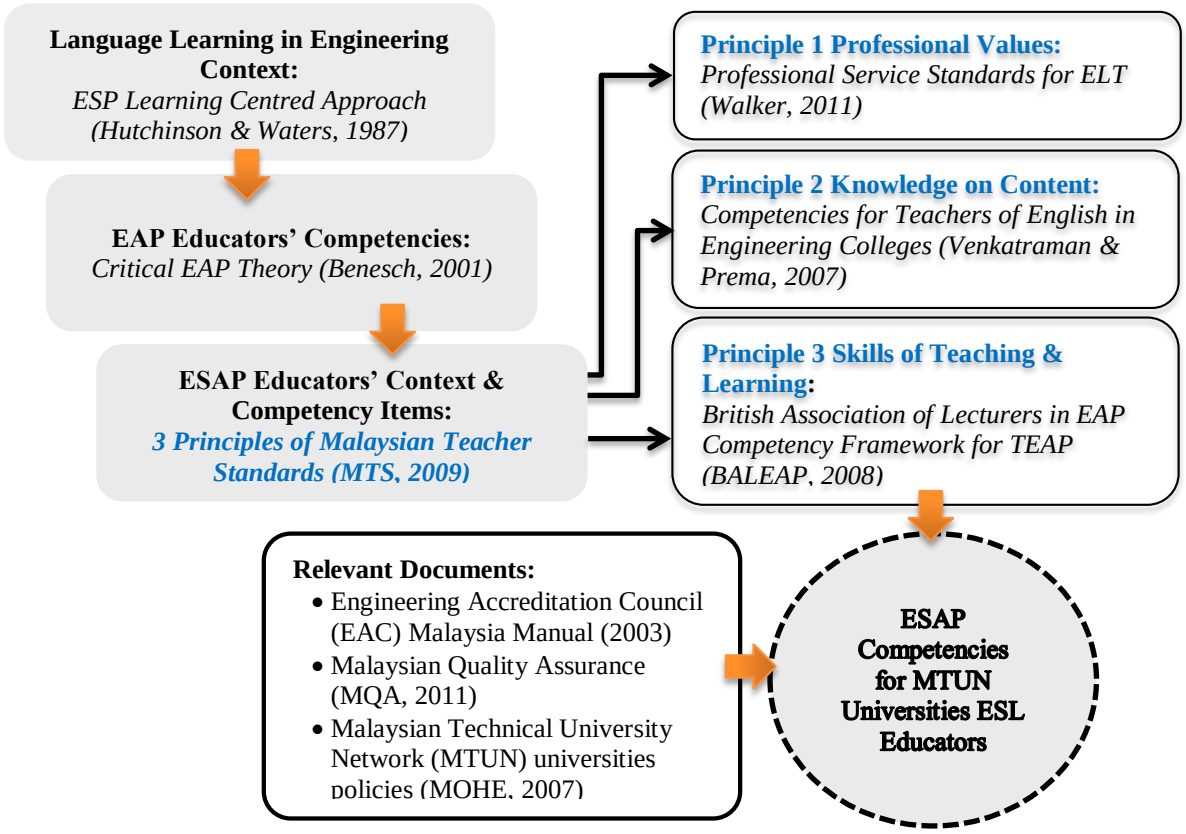

Figure 2 The conceptual framework of the study

The Malaysian Teacher Standards (MTS) for Quality Professional Educators Competency based Standard

One of the most recent initiatives in ensuring Malaysian educators' quality was the Malaysian Teacher Standards (MTS or SGM) in 2009. Three principles of the standards that have been adapted are

1. Professional values within the teaching profession refer to those values educators hold and that should be developed so that educators can more effectively contribute to the teaching profession to achieve the aims of the national education system,
2. Knowledge and understanding of education, subject matter, curriculum and co-curriculum indicates that educators should have sound knowledge to improve professionalism in teaching, carry out their duties efficiently and effectively and be more creative and innovative, and
3. Skills of teaching and learning focus on the ability of educators to plan, implement and evaluate teaching and learning and extra-curricular activities (Education, 2009).

The Professional ELT Service Standards

The Professional ELT Service Standards is an inventory of expected behaviours and attitudes for New Zealand English ELT professionals by Walker (2011). It is a framework of ELT professional values that are "vested in the specialised, complex knowledge, training, qualifications and intellectual skills of professional staff and in the client-professional relationship" (p. 308). Walker (2011) argues that most existing ELT professional associations and statutory bodies framework, including BALEAP, are inclined toward frameworks that mainly cover core competencies, best practice or professional standards. This relagates another required entity of professional status which is educators' professional conduct in carrying out their specialisations. Hence, Walker's standards are adopted mostly for Malaysian ESAP educators' professional values element. The value will be mapped with relevant engineering work ethics so that the ESL educators know specifically what and how to behave professionally teaching in the context.

The Competencies for Teachers of English in Engineering Colleges

Venkatraman and Prema (2007) argue that English for Science and Technology (EST) teachers in India struggle in their teaching of language and communication skills to engineering learners because of insufficient exposure to science and technology. Apart from their routine classroom tasks, the teachers have to deal with needs analysis, syllabus design, materials writing or adaptation and evaluation. Hence, the researchers developed a competency framework for the English teachers teaching at Indian engineering colleges. The framework provides basic training needs information for the teachers in assisting them to teach the language in the engineering context confidently. The framework consists of 65 validated competencies and categorised in two parts i.e. Part I General Competencies and Part II Subject-Specific Competencies. The development of the competency framework supports the ESAP educators' challenges teaching in engineering field. The framework is adapted for the 'Knowledge on content' element and investigated on its suitability for the study context.

The BALEAP Competency Framework for TEAP

The BALEAP Competency Framework TEAP consists of a description of core competencies which is equivalent with masters' level and particularly useful for newcomers of EAP (BALEAP, 2008). The framework has a standardisation of practice for professional EAP educators, which is comprehensive in guiding the educators to facilitate and support learners' understanding of academic requirements and processes studying in a HE context. For this study, BALEAP framework is adapted for the third MTS principles. Since the framework consists of competencies, which do not explicitly tailor to a particularistic field of academic context, it will serve as a basis for this study in devising a narrower list of competency for Malaysian EAP educators at the engineering universities.

2. METHODOLOGY

The study proposes three phases of mixed methods approach in identifying ESAP competencies for ESL educators teaching engineering undergraduates at MTUN universities. The first phase will consist of exploratory investigations via document analysis and literature review on EAP/ESAP competencies to obtain a list of competency statements. The second phase will involve structured interviews and rounds of Delphi technique with a minimum of 13 experts who have had experiences teaching the language at engineering higher institutions. The aim is to itemise and confirm the competencies. Finally, more than 100 MTUN ESL educators will be selected to respond with the competency items in a form of survey and the result will be statistically analysed for validation. As for the analyses, the recorded interviews will be managed using Miles and Huberman's Data Analysis Model and the findings from the survey will undergo descriptive and inferential statistical analyses.

3. DISCUSSION

The need of ESAP educators' competency and learners' learning being the centric of discussion in this study has led to the development of the proposed conceptual framework for ESL EAP educators teaching the language for engineering undergraduates. Thus far, there has been a dearth in literature pertaining to competency based framework for ESAP educators in the context of Malaysia. Hence, the framework aims to provide a standardised practice that has a potential to guide the local ESAP educators on how best to approach the teaching and learning

of the language and communication skills in the Malaysian engineering HE context. Fundamentalised by the ascertained theories and frameworks and coupled with the discussed researches, the development of the proposed framework is recommended to constitute attainable competency indicators that are context specific driven. Crucially for nonnative EAP/ESAP educators, the competency framework is an attempt to bridge the gap in EAP professionalism as language specialists in other disciplines.

The study contributes to the knowledge of EAP educators teaching in engineering context to advance professionally. The findings will serve as a platform to facilitate ESAP educators on the type of training to be undertaken for the educators' continuous professional developments. Also, the discussions on the educators' challenges open up opportunities for apprenticeship between novice and experienced educators and encourage reflective teaching in advocating the ESP tenet of needs driven and contextualised approach. The practice will inspire the educators to be familiar with research practices and move beyond everyday experiences for more reliable theoretical teaching and learning practices [37, 38].

In pursuit of quality teaching, this study intends to augment the significance of communication skills through interdisciplinarity of language and engineering contents. The epistemological studies specifically in catering to ESL engineering learners' academic and job preparation purposes have becoming crucial with the increased priority of professional skills and work integrated curricula in the field. Such refinement of studies will continue to inform the educators, EAP professionals and those interested in quality HE teaching on the distinctive qualities of interdisciplinary courses and how it has expanded and innovated in light of "changing demand from students, changes in how well students are prepared for HE and the requirements of external stakeholders" (Overton, 2003, p. 275). Efficient interdisciplinarity between EAP and engineering educators not only able to increase productivity (Orr, 1995), it is also cost effective to institutions. Finally, this study is to keep pace with the rapid development in engineering education. The necessities accentuate the importance of communication skills for work ready engineering undergraduates so as to support ESAP educators to grow professionally.

4. REFERENCES

Alexander, O. (2012). Exploring Teacher Beliefs in Teaching Eap at Low Proficiency Levels. *Journal of English for Academic Purposes, 11*(2), 99-111.

Atef, A. T., & Munir, S. (2009). Motivation and Attitudes Towards Learning English: A Study of Petroleum Engineering Undergraduates at Hadhramout University of Sciences and Technology. *GEMA: Online Journal of Language Studies, 9*(2), 29-55.

Azami, Z., Yuzainee, M. Y., Mohd. Zaidi, O., Azah, M., Norhamidi, M., & Ramli, M. (2009). Employer's Perception Towards Engineering Employability Skills in Asia. *WSEAS Transaction on Advance in Engineering Education, 6*(9), 306-315.

BALEAP (Producer). (2008). Competency Framework for Teachers of English for Academic Purposes. *BALEAP the Global Forum for EAP Professionals*. Retrieved from www.baleap.org.uk

Basturkmen, H. (2012). Languages for Specific Purposes Curriculum Creation and Implementation in Australasia and Europe. *The Modern Language Journal, 96*(1), 59-70.

Belcher, D. D. (2006). English for Specific Purposes: Teaching to Perceived Needs and Imagined Futures in Worlds of Work, Study, and Everyday Life. *TESOL Quarterly, 40*(6), 133-156.

Benesch, S. (2001). *Critical English for Academic Purposes: Theory, Politics and Practice*. New Jersey: Lawrence Erlbaum Associates.

Carkin, S. (2005). English for Academic Purposes *Handbook of Research in Second Language Teaching and Learning* (pp. 85-98). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Clapham, C. (2000). Assessment for Academic Purposes: Where Next? *System, 28*(4), 511-521.

Collins, R., Li, S., & Cheung, D. (2000). Language Professionals in Engineering Faculty: Cross-Cultural Experience. *Journal of Professional Issues in Engineering Education and Practice, 126*(1), 32-34.

Dudley-Evans, T., & St John, M. (1998). *Developments in English for Specific Purposes: A Multi-Disciplinary Approach*. Cambridge, UK: Cambridge University Press.

Education, D. T. (Producer). (2009). Malaysian Teacher Standards (Standards Guru Malaysia) (Mts). *Standard Guru Malaysia*. Retrieved from http://www.moe.gov.my/sgm/index.html

Felder, R. M., Brent, R., & Prince, M. J. (2011). Engineering Instructional Development: Programs, Best Practices, and Recommendations. *Journal of Engineering Education, 100*(1), 89-122.

Gupta, D. (2013). Teaching English to Engineering Students in India. *Journal of Education and Practice, 4*(11), 131-138.

Hafizoah, K., & Fatimah, A. (2010). English Communicative Events and Skills Needed at the Workplace: Feedback from the Industry. *English for Specific Purposes, 29*(3), 168-182.

Hirsh, D. (2007). English Language, Academic Support and Academic Outcomes: A Discussion Paper. *TESOL, 2*(2), 193-211.

Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes: A Learning-Centered Approach*. Cambridge: Cambridge University Press.

Hyland, K. (2006). *English for Academic Purposes: An Advanced Resource Book*. New York: Routledge.

Hyland, K. (2007). English for Specific Purposes: Some Influences and Impacts *International Handbook of English Language Teaching* (pp. 391-402). New York: Springer.

Indra Devi, S., & Teh Zanariah, M. R. (2011). A Course on English for Professional Communication for Engineering Undergraduates in a Technical University in Malaysia: A Needs Survey.

Kaewpet, C. (2011). Learning Needs of Thai Civil Engineering Students. *The Asian ESP Journal, 7*(3), 79-105.

Lattuca, L. R., Voigt, L. J., & Fath, K. Q. (2004). Does Interdisciplinarity Promote Learning? Theoretical Support and Researchable Questions. *Review of Higher Education, 28*(1), 23-48.

Martin, R., Maytham, B., Case, J., & Fraser, D. (2005). Engineering Graduates' Perceptions of How Well They Were Prepared for Work in Industry. *European Journal of Engineering Education, 30*(2), 167-180.

Mechraoui, I. S. A., Noor, Z. M., Ibrahim, E. H. E., Muhamad, A. J., & Malek, F. A. (2013). Stakeholders' Perceptions of an English for Occupational Purposes Course. *World Applied Sciences Journal, 21*(special issue), 73-87.

Melles, G., Millar, G., Morton, J., & Fegan, S. (2005). Credit-Based Discipline Specific English for Academic Purposes Programmes in Higher Education: Revitalizing the Profession. *Arts and Humanities in Higher Education, 4*(3), 283-303.

Morgan, B. (2009). Fostering Transformative Practitioners for Critical Eap: Possibilities and Challenges. *Journal of English for Academic Purposes, 8*(2), 86-99.

MQA. (2011). Implementation on Programme Standard for the Field of Engineering and Engineering Technology *Malaysian Qualifications Agency*. http://www.mqa.gov.my/

Muhamad, A. J., Shah, M. I. A., & Ibrahim, E. H. E. (2013). Oral Presentation Errors of Malaysian Students in an English for Academic Purposes (Eap) Course. *World Applied Sciences Journal, 21*, 19-27.

Orr, T. (1995). *English for Science and Technology: Profiles and Perspectives*. Aizuwakamatsu, Fukushima, Japan: University of Aixu, Centre for Language Research.

Overton, T. (2003). Key Aspects of Teaching and Learning in Experimental Sciences and Engineering *A Handbook for Teaching & Earning in Higher Education (2nd Edition)* (pp. 255-275). London, UK: Kogan Page.

Reave, L. (2004). Technical Communication Instruction in Engineering Schools: A Survey of Top-Ranked Us and Canadian Programs. *Journal of Business and Technical Communication, 18*(4), 452-490.

Sageev, P., & Romanowski, C. J. (2001). A Message from Recent Engineering Graduates in the Workplace: Results of a Survey on Technical Communication Skills. *Journal of Engineering Education, 90*(4), 685-693.

Slater, T., & Mohan, B. (2010). Cooperation between Science Teachers and Esl Teachers: A Register Perspective. *Theory Into Practice, 49*(2), 91- 98.

Venkatraman, G., & Prema, P. (2007). English Language Skills for Engineering Students: A Needs Survey. *ESP World, 316*.

Walker, J. (2011). Being Professional in English Language Teaching Services: A Delphic Panel Study. *Quality Assurance in Education, 19*(4), 307-334.

Ward, J. (2009). A Basic Engineering English Word List for Less Proficient Foundation Engineering Undergraduates. *English for Specific Purposes, 28*(3), 170-182.

Wong, F. F., & Thang, S. M. (2008). Developing Academic Competency for Studies in English: The Malaysian Esl Teachers' Perspective. *English for Specific Purposes World, 4*(20), 1-28.

Wu, H. D., & Badger, R. G. (2009). In a Strange and Uncharted Land: Esp Teachers' Strategies for Dealing with Unpredicted Problems in Subject Knowledge During Class. *English for Specific Purposes, 28*(1), 19-32.