

A Deeper Lecturer and Student View of a Sustainable Learning Requirement in Tertiary Education in Malaysia

A sub-study of a university development research in Private Higher Education in Malaysia

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Abstract

The landscape of higher education is in an unstoppable process of changes. A new generation of students are entering universities, who are expecting lecturers to "spoon feed" them with knowledge, as they experienced during their school life. In addition, students see education as the process of obtaining to pass examinations. On the other hand, the lecturers' approach is also changing; more industrial experts are joining universities to work together with traditional lecturers in Malaysia, who come with different student expectations. Generally they expect students to be self-driven and independent, as employees of the industry, but today's students do not possess these abilities. This is what the paper looks at as an educational development perspective in Private Higher Education in Malaysia to look on both sides, that is understanding teaching and learning and trying to show how lecturers' expectation and students' need are more similar than ever expected before.

1. Introduction

Today's learning expectation of lecturers and students in universities are extensively different, especially in Asia, where students are still growing up in a Confucius learning habitat, where the teacher is always right [38]. Teaching is based on a frontal teaching approach in which the teacher is talking the entire time and students are listening and remembering. In addition, learning is only based on passing examinations and entering a well-known university. However, outside classroom they are highly technology driven, as it is a part of their activities. These two learning environments shall be the main part of learning in higher education in a student's perspective.

Furthermore, today's students are members of Generation Y, presenting a new understanding of learning. As just mentioned, these students are strongly technology-driven. Every activity is connected with technology, such as smart phones and social media. In

addition, Generation Y is a generation of sharing information. Learning is not based on one person. Instead, learning happens in groups and students are supporting each other in their learning process.

On the other hand, industrial experts who join as lecturers have their own expectation. They view students to be independent and self-driven, who they can manage their studies without basic guidelines. They see their role more as a mentor, facilitator or guidance in supporting students to achieve expected study aims rather than a frontal lecturer. They expect students to act similar to employees in companies and bring such expectation with them into the classrooms.

Moreover, teaching is not based only on frontal teaching. Lecturers are looking in the possibilities to have interactive classes, where students are involved in the learning process. Lecturers are more seen as mentors who guide students through their learning experiences. Learning is strongly connected to reflection on learned theoretical knowledge and students are required to connect this knowledge with real life scenarios and work experiences. However, as mentioned earlier, in Asia, learning is still based on a passive learning through listening and the transformation to a student centred learning structure is challenging.

This paper will firstly identify the expectation of today's lecturers in Higher Education. The focus is on lecturers who have worked their entire career in Higher Education and on lecturers who have joined Higher Education from the Industry. Industrial experts as lecturers are a new trend in Higher Education and needs to be considered in this research in order to create a realistic picture of lecturer profiling.

Secondly, the students' view of their learning style will be reflected. Since today's students are representatives of Generation Y, their learning styles are different from those of Generation X or Baby Boomers. New requests and wishes need to be considered. For example, today's students have grown up with technology and they use technology in all their daily work. However, whether the universities have reflected this new direction in their teaching style is still an open question.

Finally the information from both sides will be compared to figure out if there exists a gap between lectures' and students' understanding of sustainable learning environment.

2. Literature Review

2.1. Teacher-centred learning

A classical structure of a university shows that the professor is the centre of knowledge. He is the person who delivers the knowledge and interacts with students [11],[9] Generally, a lecturer is entering the classroom and presents his notes over the next two hours. Students are silent listeners and try to take notes. The lecturer does not answer questions through his talk and does not motivate students to interact [1]. Huba and Freed describe teacher-centred learning as an assessment based learning tool, where assessments are managing the learning progress. Students are not actively involved in the learning process, and review information in a passive way [17],[7],[21]

A. Student-centred learning

Leo Jones describes student centred learning as:

“A place where we consider the need of the students, as a group and as an individual, and encourage them to participate in the learning process all the time. The teacher’s role is more that of a facilitator than an instructor, the students are active participants in the learning process. The teacher (and the textbook) help to guide the students, manage their activities, and direct their learning. Being a teacher means helping people to learn – and, in a student-centred class, the teacher is a member of the class as a participants in the learning process.”[21]

This definition of student-centred learning shows that teaching can be different to a frontal lecturing. Student participation in the classroom and especially in the learning process has to be strengthened. It means that students' learning habits are the centre of classroom management and not the information giving by lecturers and the information collected by students [2],[12]. For example, today's students in Higher Education are strongly technology-driven in their daily life and they wish this technology could be a part of classroom experience too [29]. Student-centred learning is suggesting that between lecturing, there needs to be group work, activities, authentic tools, recourses, or experiences, so that students have the chance and the time to absorb their course information [5]. Jones speaks about “learning for each other” and

students “are more involved” in classroom activities [21]. The lecturer is mentoring the students in their learning progress and supports them with ideas and suggestion [18]. Nevertheless, it does not mean that the lecturer is giving students the answer for fulfilling their tasks [28]. It is more in a way that the lecturer is discussing with his students about the problem and their solution strategies to help them understand the problem deeply, supporting students to find the right solution by themselves [25], [28].

However, “a student centred classroom is not a place where the students decide what they want to learn and what they want to do.” [21]

The lecturer is the coordinator of his class and manages the learning progress of his students and learning outcome of the course [26]. It is more the way how students achieve the learning outcome in each course which stands in the middle of the discussion. Each student has a unique way as how to learn and his lecturer needs to be aware of it [4], [26].

The student-centred learning is a model, which is accepted by students in Higher Education, and in Malaysia, it is shown in the research paper of Mai Neo and Ken Neo Tse Kian. Their idea is to involve students in their learning progress, bring technology in the classroom and support the learning of their students [27]. Overall, the student feedback was positive. On a scale from one to five, students ranked their new classroom learning style between 3.8 and 4.2.[27]. Especially the “allowing being creative in their thinking” scored 4.15. Neo also asked his students about their ability to learn more in student-centred learning-environment compared to the classical teaching environment. Students gave similar positive answers, and around 55% saw their learning progress enlarged [27] and also performed better in their assignments [33]. Another example of student reaction to student-centred learning comes from Taylor's University lecturers' feedback. From the beginning to the middle of 2011, lecturers, who joined the student centred learning training course, were asked to try one student centred learning approach in their class and give feedback about how students thought about the change of teaching and how the lecturer himself felt about the students' learning progress and class participation. All feedback showed that students appreciated student-centred learning approach and that they understood the topic better and faster. Also the feedback from the lecturer side was similar. Lecturers were fascinated about their students' participations in the class and made the decision to enlarge their student-centred learning activities in their classes. Andeth Deay also described: “Teacher saw themselves as more creative, more excited about teaching” and are “more open” for new teaching strategies and starting to share responsibilities with their students.[8].

Through learning activities in the classrooms, students get the chance to work on real life problems and try to solve them based on their knowledge [35] and on the input from their lecturer. Students learn to “develop characteristics of lifelong learners’ motivation, self-evaluation, time management and the skill to access information” [23]. Students start to work independently and in a self-motivated manner [3] and achieve what a lecturer’s request on a classroom is. Students are self-driven, self-motivated and independent problem solvers [25],[34].

B. Asian School Concept

Asian schools systems are generally based on examination systems to categorize students’ knowledge and assign students to the right next higher learning institution. The UNESCO Report from 2010 described three traditional examinations in secondary school levels; students have to take an examination before they enter the secondary; they have to do an examination between lower and higher secondary, and they have to do the third examination when the finish secondary. All three examinations have the purpose to assign students to the right school type and level [15]. These examination pressures are extensive to students and indirectly force students to do everything to pass with the highest marks [15].

Another phenomenon in Asian schools education is “Spoon Feeding” / Teacher Cantered Teaching Style. Teaching is still doing frontal teaching methods where the teacher/ lecturer is presenting the topic and telling students what they have to copy and to memorize [36]. Student’s ability of independent and practice oriented learning is not considered in the teaching style. This rote learning is still being practiced where students learn without understanding and “preventing students from having to think or act for themselves” [30],[36]. Especially memorizing is a common practice, so that students pass their examinations with high grades [10].

The classical Asian school system shows that students are taught in a spoon-feeding method to memorize information to pass examination [33]. Students are not used to being independent learners in higher education, and they do not know how to turn to self-learning habits. When they join university, they expect their lecturer to provide them with the information of what they have to know/remember in passing examinations. Learning in the university is not remembering facts; it is to understand scenarios and create strategies in how to handle these situations [38].

Outside of the classroom, students are multitasking and technology driven. Their life is based on technology, such as smart phones and laptops and surprisingly there are absolutely independent actors in dealing their private life [24]. They are facing daily

situations where they have to act immediately and they do in the best way as they have discovered through their real life experiences [31].

Students are already having a learning conflict through their study time. At school they are taught to be dependent on the teacher/lecturer and outside school, they are independent problem solvers, who wish that this independent learning style could become a part of their school learning too. The example of Chinese students at Australian Universities showed that students can adopt independent learning through their university study and that they appreciate it [36]. But how is it possible to implement it in Private Higher Education, so that all students have the chance to study in their own way and at their own pace?

But what is with “Real World Skills” and “understanding, application, and the practical side of things?” [10] Do students get the opportunity to develop their independent and self-coordinated learning? And do Asian students appreciate this different way of learning? Both answers can be responded positively, e.g. The Malaysian Ministry of Education is already suggesting schools and educational institutions to implement student centred learning and ICT based learning in their daily teaching styles [19]. They are implementing problem-based learning and lifelong learning in schools and universities, so that students are able to solve real life situations after their studies [20],[37]. And students prefer this different approach of learning. An Australian Research [36] shows that Chinese students are confused and partly lost at the beginning of their study in Australia, but shortly they adopt a different learning style and feel more comfortable with it. Furthermore, students in Malaysian private universities are also showing a change in learning styles. They prefer a self-driven learning style where lecturers are not telling them what to they have to know, and instead focus more on guiding students through the topic. Further, the ICT component is a central aspect, and today’s students are technology-driven and see technology as part of their learning environment [22]. Students have started to bring their daily learning style into their academic learning and feel comfortable in how they learn.

C. Generation Y

Students who are entering in today’s universities are members of Generation Y. They were born between 1982 and 2000 and standing out with their different behaviour [24]. This new university generation grew up with technology and internet [6],[31]. For example, mobile phones are a constant companion in their daily life [13]. And it is questionable that this generation could live without

mobile phones. This also means that chatting, messaging and being online is part of their study behaviour. McCrimdle also shows in his research paper that Gen Y identifies themselves with characters in TV and movies, instead of real persons such as politicians or scientists.

Furthermore, peers are their source of gaining information [6], [24]. Gen Y prefers to get answers for their questions from friends and their peers rather than their parents. Peers have unlimited influences on Gen Y decision making, which shows that their own decision has no value compared to the peers' choices. This is to say that through their study in university, all students' decisions are based on peer decision and thus they follow peer decisions without questioning. This could give lecturers at university new challenges such as personal support.

Connected with the peer influences, Gen Y members think in a globalist way [24], [31], where their decision is not in the benefit of a single person but for more in the good of the society. I.e. includes that cultures, religions or nationalities are not a boundary of decisions [14]. Decisions are made for all members of the society and no one will be left out.

The understanding of life is more based on the need of the moment, i.e. Gen Y is "working for life." [6] This generation is doing as much as it needs to be done and enjoy the achievements, which include fun and enjoying life which is the central life philosophy for them [14].

Working/ studying behaviour of Gen Y is based on their interest [6]. If they are not interested, they do not do it. However, if they are, they will do it independently [14], [31]; Gen Y students need spontaneity, interactivity and fun at their study [6] and make their decisions of pace and place of their studying [31]. One reason why study needs to be spontaneous and creative is the shorter consecration periods from 15 to 20 min [31]. Student need to have diversity. Studies need to be carried out in smaller pictures which will be linked to a bigger picture in a later learning process [31]. Learning should also be a pictorially process connected with "hands-on approach", group work, discussions and without repeating [13], [31]. In addition, Gen Y is asking about the "WHY" behind every action [16] and will make their decision if this request should be done or not. This shows that Gen Y is working in a high level of independency and design work processes by themselves. It does not imply that Gen Y is not following instructions, but with the "WHY" question they try to "find better and faster ways" to succeed [16].

Connected to their study behaviour is that Gen Y are multitasking in all their activities [6], [13]. Ms McEwan shows that Facebook can become their work/ study place, where they collect information or consult

friends for getting the information they need. This shows Gen Y are looking for fast and immediate feedback [16] and do not accept the classical information research former generations.

3. Methods

To collect a general overview of lecturers' learning and teaching expectations in a classroom and students' preferred learning styles, this research was assembling data from different research projects, which were done at Taylor's University. The main data came from the teaching and learning development project where lecturers and students were interviewed and surveys were given out to collect feedback from all different schools in the university.

For the lecturer side, 10 lecturers were chosen randomly in each of the seven schools. In smaller schools like medicine and language, the population were involved in the survey process. In other schools, the random sampling was adopted, and the different level of education, the years of working at Taylor's University and work experiences were taken into consideration.

The survey were structured in 5 dimension open ended questions and asked lecturers about their positive and negative experience at their workplace, and their dream of how teaching and learning should be transformed for a perfect learning environment.

Furthermore, from each school two lecturers were invited for a group interview to analyse their understanding of an optimal teaching and learning environment in tertiary education. For the smaller schools, these two lecturers were chosen from the population when they were already involved in the survey process. In the 5 bigger schools, those lecturers who were not part of the survey process were chosen.

The group interview was a narrative interview, where the interviewer asked questions one by one and give time to collect answers from the group discussion. The structure of the interview question was the same as that of the survey, to ensure the same information measurement and to support the categorizing of all information from the surveys and the interview.

From the student side, 10 students were randomly chosen from each school and were asked to fill out the survey. The random choice needs to be done in different ways because of the timing of the development project. Few schools were still in their semester and students were located in their classes. Other schools were already in the examination time and students were randomly chosen after their examination to fill out the survey. One school was already in holiday and through one student, 10 students were chosen randomly. The survey was sent by E-mail to these students and was sent back to the researcher.

Overall 95 students gave the filled out survey back to the researcher.

The structure of the survey was similar to the lecturer survey and was structured in 5 dimensions. The dimensions asked about positive and negative experiences at their daily study, and their dream of how teaching and learning should be transformed for a perfect learning environment.

Besides the survey, 25 students were randomly chosen for the group interview. To ensure the voice of the all students in the university, the researchers decided to specify the selection of the students from the student consul were all schools are present.

The structure of the interview was the same as the lecturer group interview and questions were related to the five dimensions of the student survey.

Furthermore, a case study of a lecturer-training program was used to support a deeper understanding of lecturers' expectation of a professional teaching and learning environment in tertiary education. Through a training program to help industrial experts to become professional lecturer in tertiary education, conversations were recorded and feedback was documented. This training was held once a week for an entire semester to guide industrial lecturers in their teaching and learning development.

4. Discussion and Findings

4.1. Lecturer survey

Through the academic development planning at Taylor's University, lecturers were asked to get an overview what is their view of teaching and learning. The first step was to handle a short survey with 5 open-ended questions to 10 randomly chosen lecturers from all different schools. Their response was positive and out of 50 surveys given, 44 surveys were returned. The questions asked about lecturers' positive and negative experience at their workplace, and their dream of how teaching and learning should be transformed for a perfect learning environment. Out of the 44 surveys, the following teaching and learning outcomes are achieved:

The first outcome is that students need to be more independent. Lecturers are explaining that students in classrooms are too passive. They only sit and listen and need to be guided through the classwork. They even need to be told about basic things like what students have to bring to class, such as pen and notebooks. In the view of the lecturers, students are not independent learners and the main responsibly of the lecturer is to tell students what is important and what needs to be remembered for the examination. Independent study

behaviour, where students take notes by themselves and review class material critically and connect these materials with real life scenarios independently, does not exist.

The second outcome is that lecturers are requesting a stronger academic foundation of their students, before entering Higher Education. In the view of the lecturers, students are not ready to study in universities. In this case, independence, which was explained in the first outcome, is not developed. Furthermore, independent thinking and critical thinking to analyse situation and theories are a new learning experience for students in tertiary education. Lecturers also mentioned that basic knowledge, which should be learned in secondary school is lacking. This might be contributed to the Asian learning style, where learning is only based on passing examination and not on reflective learning.

The third outcome is that teaching and learning need to be linked to the industry. Especially subjects with a strong industrial link, such as hospitality and culinary are requesting a strong industrial knowledge. Lecturers are looking forward to combining theoretical knowledge with industrial expertise and scenarios. Their understanding of today's learning is a strong link with the industry to support students in their learning process.

The fourth outcome is that teaching and learning need to be based more on problem-based learning. Memorizing theoretical concepts for passing examination is not the right way of learning in the view of tertiary education lecturers. Students need to understand and reflect on these theoretical concepts. One way, which was suggested in several surveys, was problem-based learning. Students should get problem-based scenarios, which they have to analyse in their courses and give solution to solve these cases.

Furthermore, lecturers are looking at a student-centred learning approach. Learning should be more active, where students are involved in the learning process through group assignments and discussions in the classrooms. Students have to start to ask questions and discuss points in their classes. In addition, lecturers understand learning as a process, which is not only a passive listening, but a more active interaction between lecturer and student.

This interactive participation in classrooms was stressed by nearly all lecturers. Their understanding is that learning is a two-way process. On one side, lecturers have to explain theoretical concepts in their classes; however, the learning process only starts with the reflection of the explained theory. Students have to ask questions and start to reflect on the theory through class activities. Only in this way, students are learning in classes and can use this learned knowledge in their future workplaces.

The last point which lecturers highlighted is that lecturers need more specific training programs for lecturers. Teaching and learning is a constantly changing process and to support students through their learning, lecturers need to be aware of these changes. Requesting students to change their behaviour in classes is one way. However, the teaching methods also need to be more flexible and should be aligned with students' learning behaviour. For this reason, lecturers ask for more training support in their institutions.

4.2. Lecturer group interview

Another instrument through the academic planning research which has been used was the focus group interview. Eleven participants from all different schools and with various professional backgrounds (e.g. years of teaching experience, industrial background) were present. Through this narrative interview, all participants were asked a question about their teaching experiences and their dream about how teaching and learning can be transformed. The interviewed lecturers mentioned the following teaching and learning points:

The first comment was that students are only memorizing through their studies in classrooms. Lecturers mentioned that through this memorizing, students remember the material but they cannot reflect or analyse it. An understanding of a sustainable learning is that students are capable of reflecting their learned material and could connect it with real life scenarios in their field.

Furthermore, lecturers also realise that students' concentration span is getting shorter each year. Today, students can only concentrate maximum 15 minutes on classes before they lose their concentration. Lecturers are facing difficulties to deliver their classes and start to look for different ways to teach and give students regular breaks in classes.

As mentioned in the lecturers' surveys, all interviewed lecturers pointed out that students need to be more independent. Through their learning in classes, students are too passive and only listen to their lecturers, but do not reflect on their learning. Lecturers have to tell students what they have to do step by step. If a lecturer does not give exact guidelines through his/her class, students will not learn in his classes.

Connected with independent learning, lecturers also mentioned that students are not ready to enter tertiary education. Their fundamental knowledge of learning is too limited and students are dependent through their studies. Techniques such as note taking, academic writing skills and time management are not practiced by students and lecturers have to start to teach students these fundamental learning skills before they can start to teach the topic. However, the time over one semester

is limited and lecturers are facing difficulties to deliver their classes.

An additional phenomenon is that students bring technology into their classes. Smart phones and laptops are standard learning tools in today's classrooms. Students collect information that they need for their courses via technology and share this information in their classes. Learning is becoming a sharing process between students where everybody is involved, giving his or her knowledge to the learning group.

Another point is a classical issue over the last decades. How big should a right learning space be? Lecturers prefer smaller classes with maximum 20 students to support an optimal learning environment. However, lecturers are facing classes with over 50 students and in some subjects over 100 students. With these class sizes, teaching is only a process of giving information, and reflective learning, group work and discussions are difficult to implement.

Lecturers prefer teaching in a more traditional style. The influence of technology in classrooms is not fully supportive to mentor students through their learning process. The easy access to information and the availability of a big variability of teaching technology is more distractive of the learning progress of students. However, students should concentrate on classes reflect on their learning.

The last point is that lecturers ask for specific training programs to support their teaching. Through changes in teaching and learning, lecturers are enthusiastic to learn new teaching strategies to mentor their students through their courses.

4.3. Student survey

The survey was designed to be similar to the interview, where students answered two questions, which asked about their positive feedback of their learning environment and their dream of the "perfect" university. For each question, they could answer as much they wanted, which were afterwards analyzed and categorized. The student survey feedbacks are as follow:

Students are looking forward to a more active learning environment; especially projects and problem-based learning should become part of learning in tertiary education. This means passive learning, where students listen to a lecture, should be replaced with active learning. Students particularly mentioned projects assignments, where they get the opportunity to practice their knowledge and can connect this knowledge with daily work structures.

These projects need not be based on classrooms activities. Students would like to do more learning activities outside their classrooms, for example through

field trips or company visits, where they can observe real life scenarios besides their knowledge gathering.

In today's classroom, technology has to be an active teaching tool. Technological tool include computers and projectors, which can be implemented in every classroom. Furthermore, students tend to use smart phone and laptops as learning tools to research and collect needed information instead of reading through books and journals. This does not mean that students are dismissing books and journals. Another feedback was that the library has limited information and more reading materials need to be added, which includes more books on one specific topic or more copies on one individual book. Moreover, e-books and e-reading materials are more requested by students for their learning progress. This request could be connected with the wish of technology in classrooms and the more active learning environment.

4.4. Student group interview

Through the interview, students were asked two open-ended questions about their positive feedback of the learning environment and what is their dream of a "perfect" university. The responses were gathered:

Students see learning as a process of gaining information and knowledge, which could mean that students are in classrooms only for listening to the lecturers and taking needed information with them. The classical example is collecting information to pass examinations with the highest marks possible. Gaining knowledge also could mean the opposite of passive learning, where students are active in their classes. This learning process combine listen to the lecturer and discussing the course information.

This learning should not only take place inside the classroom. Students want to tie their theoretical classroom knowledge with practical experiences outside classrooms. Again, the interviewed students mention field trips and company visits. Their understanding is that practical learning experiences are helpful to understand theories and business structures.

However, knowledge also comes from printed material. Besides practical experiences, students are looking for the possibility of extending the university library, such as extra books and journals as well as digital learning materials. Furthermore, digital learning materials are requested for a fast and precise knowledge collection. Students request new ways of learning, such as digital databases in the university.

The last point which was mentioned is the use of social media in their learning process. Learning through exchange of information is a standard way of Generation Y and should be included in daily classroom learning processes. This could mean that only students get the opportunity to use social media in

classrooms or that the lecturer is part of the social media pool and uses it as an interactive communication tool to support students' learning process.

4.5. Lecturer training case study

Industrial experts who joined Higher Education have their own expectations of how students act. To understand their expectations, a deeper look into their work culture and habits needs to be done, especially in the field of hospitality where working habits and the classrooms teaching styles conflict. Through narrative interviews with one industrial expert, the following information were gathered:

Students are struggling and cannot follow in his classes. He faced difficulties in his classes to deliver information to his students. At his former industrial work places, he was used to an open discussion and guided information working style. However, when he tried to discuss subject-based problems to guide his students through theoretical and practical scenarios, students failed to follow. Through his observations, he realised that today's students are not capable of reflecting on given information and creating a link between this information and further work procedures.

Furthermore, students are not sharing their opinion in their classes. Every time when he asked questions or asked for feedback, students kept silent. Also, when he asked students, the students did not give any answer. However, reflection on information is a central part for a learning process and students need to be more active in classes.

5. Conclusion and Recommendation

Overall, the picture of a sustainable learning environment in tertiary education is similar in the view of lecturers and students. Especially the wish for an interactive teaching and learning experience exists on both sides. Lecturers prefer to combine information giving with practical projects, where students get the opportunity to manifest their theoretical knowledge. In this way, theoretical and practical information could be taught and students are prepared for their future working life. Students have a similar view, where they are looking for opportunities to gain practical experiences in and outside of the classrooms. They understand learning more than collecting theoretical knowledge and see learning as a link between classroom information and work experiences.

These practical experiences could be given in classrooms, where lectures prefer to give group assignments and discussion. In this way, students could reflect instantly on their learned information and can connect it to their real life scenarios. Students would accept practical exercises in classrooms; however, they

prefer to gain practical experiences outside of the classroom, such as field trips and company visits which were mentioned in the interview and the surveys. Lecturers are open-minded to outside experiences, but see it more sceptical. The concern is that students are not ready to study in tertiary education system. Particularly the independence of students work styles are not developed as many universities and companies are requiring it. Students need to be strongly guided at the beginning of their study in universities and need extra training of study and working skills. Only if these skills are further developed, do lecturers see students ready to get practical work experiences for their studies.

Lecturers and students also see the use of technology in classroom as a positive step to support teaching and learning. Lecturers are looking for the opportunities to use computers and projectors as teaching tools. In this way, information could be given easily and a larger number of students could collect such information. Students, who are members of Generation Y, see technology as a stronger learning tool as lecturers, especially smart phones and social media which were mentioned. Sharing information and an instant collection of information are the needs of today's students outside of classrooms and should be also implemented in classrooms. However, lecturers see this step more critical; students are losing the ability to concentrate and reflective learning. Instead, they look for information and do not remember it afterwards. Lecturers prefer a more classical approach of learning where students reflect on given information with their knowledge. Students can use technology as a further information-collecting tool to manifest their knowledge.

Learning is not only based on getting practical experiences. Moreover, theoretical learning is required to increase students' knowledge in tertiary education. For this reason, students are looking for more different ways of collecting information. For example the expansion of the library was motioned, where more course-specific information should be offered, such as classical books, or journals. E-learning materials are also stated, which can be a good alternative information source in learning.

This additional learning literature was also mentioned by lecturers, who cited that students need more foundational knowledge of their subjects to follow their classes. To this end, library should extend their literature repertoire to support students' basic knowledge.

This research suffers from a number of limitations. The research focused only on one specific time and did not look over a timeframe, where the change of teaching and learning could be defined more specific. However, this research gives a clearer picture of lecturers and students' view of sustainable learning

environment in tertiary education and shows that the learning environment is similar and can be arranged to both sides' benefits.

Furthermore, the research was conducted on a sample of lecturers and students. In further research, the sample should be changed to the population at the university and if possible, extended to other universities with similar structures to arrive at a clearer picture of a sustainable learning environment in tertiary education.

6. References

- [1] Allen, M. J. (2004). *Assessing Academic Programs in Higher Education*. Higher Education. Bolton, MA: Anker.
- [2] Attard, A., Di Ioio, E., Geven, K., & Santa, R. (2010). *Student Centered Learning An Insight Into Theory And Practice*. American Journal of Applied Sciences.
- [3] Bender, B. (2003). Student-centered learning: A personal journal. *ECAR Research Bulletin*, 2003(11).
- [4] Biggs, J. (2007). *Teaching for Quality Learning at University Third Edition Teaching for Quality Learning at University*. Higher Education (p. 335). SRHE and Open University Press.
- [5] Burns, M. (1999). On the Road to Student-Centered Learning. *TAP into Learning*.
- [6] Castells, M. (2009). *Generation Y: Coming To A Workplace Near You*. *The Smart Work Company* (pp. 1-5).
- [7] Catalano, G. D., Catalano, K. C., Point, W., & York, N. (n.d.). Transformation: From Teacher-Centered to Student-Centered Engineering Education and Center for Enhanced Performance United States Military Academy The Instructor / Professor ' s Roles in " Student- Centered " Education.
- [8] Deay, A., & Saab, J. F. (1994). Student-Centered Learning Communities: Teachers' Perspectives. *Journal of Research in Rural Education*, 10(2), 108–115.
- [9] Delafuente, J. C., Araujo, O. E., & Legg, S. M. (1998). Traditional Lecture Format Compared to Computer-Assisted Instruction in Pharmacy Calculations. *Solutions*, 62.
- [10] Doe, J. (2011). Teaching, Spoon-Feeding, or Force-Feeding? *Malaysia Today*. Retrieved October 20, 2011.
- [11] Escotet, M. A. (1995). A Teacher-Centered University Education: Is the Core University Culture Different between Developed and Developing Countries? *of the Comparative and International Education*, 1-16.
- [12] Froyd, J., & Simpson, N. (2000). Student-Centered Learning Addressing Faculty Questions about Student-centered Learning What is meant by Student-centered Learning (SCL)? *Science Education*, (1997).

- [13] GENERATION Y: THE MILLENNIALS READY OR NOT, HERE THEY COME. (2006). *NAS Insights*.
- [14] GENERATION Y : Winning Snack Strategies. (2001). *Primar International*, (June).
- [15] Hill, P. (2010). *Examination Systems. Review Literature And Arts Of The Americas* (p. 41).
- [16] Hobart, J. W. (2008). Understanding Generation Y What You Need to Know About the Millennials. *Princeton One White Paper*.
- [17] Huba, M. E., & Freed, J. E. (2000, August 15). Learner-Centered Assessment on Colleges Campuses; Shifting the focus from teaching to learning. *Physical review letters*. Allyn & Bacon; St., Needham Heights, MA.
- [18] Ibrahim, A. (2002). STUDENT CENTERED LEARNING – AN EXPERIENCE OF THE KUKTEM ' S PRACTICE.
- [19] Ibrahim, F. bt, & Quek, L. S. G. (2007). Malaysia : Education for Sustainable Development (ESD). *Asia and the Pacific Regional Seminar-Workshop on Educational Technology-2007 Tokyo: Asia and the Pacific Programme of Educational Innovation for Development (APEID)*. 1-16.
- [20] Isa, B. (n.d.). *MULTICULTURALISM IN ART EDUCATION : A MALAYSIAN PERSPECTIVE*. *Art Education*.
- [21] Jones, L. (2007). The student-centered classroom. *Cambridge University Press*. New York: Cambridge University Press.
- [22] Kahl, C. (2012). Student dreams of a perfect teaching environment in Private Higher Education in Malaysia.
- [23] Kiley, M., & Cannon, R. (2000). *Student-centred Learning*. *Learning* (Vol. 1968).
- [24] McCrindle, M. (2006). Understanding Generation Y. *The Australian Leadership Foundation*.
- [25] Motschnig-Pitrik, R., & Mallich, K. (2004). Effects of Person-Centered Attitudes on Professional and Social Competence in a Blended Learning Paradigm. *IEEE Educational Technology & Society, to appear*, 7, 176-192.
- [26] Di Napoli, R. (2004). What is Student Centred Learning ?
- [27] Neo, M., & Kian, K. N. T. (2003). Developing a Student-Centered Learning Environment in The Malaysian Classroom-A Multimedia Learning Experience. *The Turkish Online Journal of Educational Technology*, 2(1), 13–21.
- [28] Pedersen, S., & Liu, M. (2003). Teachers' beliefs about issues in the implementation of a student-centered learning environment. *Educational Technology Research and Development*, 51(2), 57-76.
- [29] Poku, N. (1998). Constructivism and Technology. On the Road to Student-Centered Learning. *International Relations*, 14(2), 35-45.
- [30] Samah, S. A. A. (2009). Does Spoon-feeding Impede Independent Learning ? *CANadian Social Science*, 5(3), 82-90.
- [31] Schiefer, D. (1996). G ENERATION Y IM Arbeitsumfeld. *k/c/e Marketing2*, 1-11.
- [32] Sokolove, P. G., M., B. S., Flaim, D., & Sinha, B. (n.d.). ACTIVE LEARNING vs. TRADITIONAL LECTURE APPROACH IN INTRODUCTORY COLLEGE BIOLOGY (pp. 109 - 114).
- [33] Thanh, P. T. H. (2010). Implementing a student-centered learning approach at vietnamese higher education institutions: Barriers under layers of Casual Layered Analysis (CLA). *Learning*, 15(September 2010), 21 - 38. *Journal of Futures Studies*.
- [34] Walmsley, B. (2003). Partnership-Centered Learning : The Case For Pedagogic Balance In Technology Education . *Journal of Technology Education*, 14(2), 56-69.
- [35] Wohlfarth, D. D., Sheras, D., Bennett, J. L., Simon, B., Pimentel, J. H., & Gabel, L. E. (2008). Student Perceptions of Learner-Centered Teaching. *InSight: A Journal of Scholarly Teaching*, 3, 8. Park University, Center for Excellence in Teaching and Learning.
- [36] Wong, J. K.-kuok. (2004). Are the Learning Styles of Asian International Students Culturally or Contextually Based ? *International Education Journal*, 4(4), 154-166.
- [37] Yen, N. L. (2005). Predictors of self-regulated learning in Malaysian smart schools. *International Education*, 6(3), 343-353.
- [38] Zhang, L.-Fang, Biggs, J., & Watkins, D. (2009). *Learning and Development of Asian Students: What the 21st Century Teacher Needs to Think About..*