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Feasibility of Using QR Code for Herbal Learning Among University Students

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ABSTRACT

The advance of today’s technology has influenced Malaysians to shift from conventional learning to technology assistant learning such as smartphone-use learning. In addition, with a variety of choices, people are more interested to learn about traditional medicine as an alternative of modern medicine. Therefore, the use of QR code has potential to be explored on herbs information for learning purpose. This study is an experimental study of pre-post survey questionnaire. The participants were recruited through convenience sampling of university students around Klang Valley, Malaysia. The pre-assessment was conducted prior to the training given to the participants. Then, the experiment involved training on using QR code with the participants. The post-assessment was conducted after the training. Hypothesis on interest and feasibility of using QR code was analysed using inferential statistic of Chi-Square analysis. Seventy students participated in this survey, 63% female and 37% males. A majority of the participants were between 22 to 26 years old (59%) and others ranged between 18 to 35 years old. All participants experienced using herbs while 67% experienced using QR code. The findings showed significant improvement on herbal knowledge of the participants after the training. In addition, using QR code is agreed to be feasible by 85% of the participants and the interest is over 90%. Use of QR code on herbal learning is statistically feasible and has a positive impact on improving students’ knowledge. Therefore, the use of QR code should be incorporated and expanded in learning programmes in the future.

Keywords: Technology in Education, QR code, Herbs, Herbal Learning, Traditional Medicine.
The Effectiveness of Online Learning Activities to Increase Students’ Class Participation in Higher Education

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ABSTRACT
Several efforts have been made to increase students’ participation in higher education (Dantas & Kemm, 2008; Dalileo, 2013; Bojinova & Oigara, 2013). One of these efforts is requiring students to engage in online learning activities before class so they will be prepared and participate more. Previous studies have proved that learning via online activities (e-learning) could facilitate existing face-to-face teaching to encourage more effective students’ preparation (Dantas & Kemm, 2008; Nur-Awaleh & Kyei-Blankson, 2010). Also, it is evident that students who actively participate in e-learning obtain positive outcomes in the practical class (Dantas & Kemm, 2008). This study investigated the effectiveness of online learning activities for face-to-face students and its impacts on their participation in the class based on the author’s observation on Master of Education students at Monash University. In this study, students were encouraged to access Moodle in which the lecturers have provided weekly materials and online activities. Students, then, could post their answers, comment to others’ posts and start discussion. The result found that online learning activities could effectively increase students’ participation in the class if the lecturers consider several factors such as course design, facilitation style and group dynamic. In addition, students’ participation in the class may also depend on their individual characteristics.

Keyword: Online learning activities, Face-to-face students, Student participation
The Effectiveness of Achieve3000 in the Academic Bridge Program: How an Online Reading Program Impacts the Development of Academic Reading Skills with Second Language Learners

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ABSTRACT

This study examines Achieve 3000, an online differentiated reading software, and its’ effectiveness in helping improve reading and related skills for students in the Petroleum Institute’s Academic Bridge Program (ABP), a English language foundation program which prepares students for post-secondary education in engineering. The Petroleum Institute was the first tertiary institution of higher education in the United Arab Emirates to adopt this program, and due to its success and popularity, other institutions have followed suit. The students are strengthening their academic skills, but finding a correlation between usage and test results requires extensive research on how the Achieve3000 program can be effectively incorporated into the ABP curriculum. After taking a reading assessment, Achieve3000 measures student reading levels and provides non-fiction articles adapted from the Associated Press to each student at their specific level with appropriate reading comprehension activities. At the end of each month, the program calculates their average and either raises or lowers their reading level, i.e. “Lexile.” Teachers can select articles on the program for the class to read, and every student receives the same article, but at a different lexile level. The presenter will describe the program and key findings gathered from students and teachers related to demographics, confidence in English language skills, technological knowledge, enjoyment of the program, and their feeling of academic growth due to the Achieve3000 program. In addition, specific data generated by the program is explored, such as: number of activities completed above 75%, time spent on the program, Lexile improvement, and average activity score. At the end of every semester, the Achieve3000 program is reevaluated and then and necessary changes are made the following semester to better address the students’ academic needs.

Intended audience: Teachers and Curriculum Developers

Keyword: E-Learning, Curriculum Study, Classroom Practice

1. Introduction

Achieve3000 is an online differentiated instruction program that has recently been introduced to educational institutions in the Middle East. Achieve 3000 was adopted by the ABP at the start of the 2014-2015 academic year to help provide a structured, adaptive resource for students to
improve their overall reading skills, specifically with non-fiction texts. A basic, compulsory program based on Achieve 3000 was designed for all ABP students for the first semester, and this was refined for the second semester to help standardize expectations for the different courses, increase the number of articles expected and take further advantage of the “thought question” option. In the third semester, two additional hours were added each week in order to discuss the themes and vocabulary of the designated article, develop their “thought question,” and produce summaries and presentations of newspaper articles similar to the articles on Achieve3000. This study will introduce valuable data and the subjective experiences of using the program to other similar institutions in the region as well as institutions with a predominantly high population of second language learners.

2. Methods

To collect data for this exploratory research study, a total of eleven different instruments were used: four surveys conducted with students using Achieve 3000, three surveys conducted with teachers responsible for teaching Achieve 3000, three focus group sessions (two with teachers and one with students), as well as a variety of metrics from the Achieve 3000 software, for example the amount of time spent on the Achieve 3000 website, the number of articles read, and monthly Lexile gains. In the first semester, there were a total of 471 student users, 32% were male and 68% female users. Altogether, the students read 14,672 articles above 75%, an average of 31 articles over the course of the semester. In the second semester, there were a total of 273 student users (35% male and 65% female) that read a total of 10,668 articles above 75%. Due to a more standardized approach, the average of articles read per student increased to 39 articles per student (female students 45 articles, male students 29 articles). In the third semester, there are a total of 470 students who have read 22,699 articles so far this semester, an average of 48 articles per student.

3. Presentation

The presenter will introduce the different parts of Achieve3000 and how it has been utilized and evaluated after every semester. Data from three semesters of student surveys, teacher surveys and focus groups will be presented and compared with test scores and the introduction of new activities every semester. Due to the fact that the integration of the Achieve3000 reading program varies from semester to semester, future evaluation of the program and research regarding student perception, student success, and academic skills is imminent in order to capitalize on the most appropriate, innovative and successful approach of using Achieve3000 in the curriculum.
From Students to Design Practitioners – Implementing Role-Playing Experience in Digital Media Classes using Virtual Designer, a 3d Digital Role-Playing Game.

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ABSTRACT

Educators have traditionally used face-to-face role-play as a pedagogical tool to assess students’ knowledge proficiency and attain desirable learning outcomes. Role-playing as different characters in hypothetical scenarios enables learners to empathize, problem-solve, learn by doing and apply knowledge into different contexts whilst engaged in a low risk environment. There is a lack of studies exploring the use and pedagogical benefits of role-play within digital game environments, particularly in the context of design education at tertiary level. This paper will discuss how digital role-play was implemented in undergraduate Digital Media courses using Virtual Designer, an interactive 3d digital role-playing game. This game was embedded with learning content based on formal educational objectives of 2 undergraduate digital media courses and play-tested by first year digital media students (n=84) of a transnational university in Vietnam. Surveys and tests were conducted prior and after play-testing to identify key learning challenges students faced when studying design courses and their overall perception on whether the digital role-playing experience in Virtual Designer enabled them to effectively overcome the identified learning challenges.

Based on results, 2 key learning challenges were identified. The first learning challenge is students often struggle to apply theoretical design knowledge acquired from lectures and study resources (books, study materials, etc.) into practical application of their digital media projects. The second learning challenge was students lacked proficiency in the use of design vocabularies and design theory knowledge to confidently articulate, critique and communicate ideas. Virtual Designer seeks to bridge this gap and address both learning challenges. Through in-game scenarios and interaction with virtual characters, students role-played as design practitioners by
applying theoretical knowledge to solve complex design tasks and problems within an interactive game environment. Results indicated that students agreed that the use of Virtual Designer enabled opportunities to apply design theory knowledge into practical settings and improved their design vocabulary skills.

**Keyword:** Role-playing, game-based learning, serious games, design education.

1. Introduction

Educators have traditionally used face-to-face role-play as a pedagogical and evaluative tool to attain desirable learning outcomes within classroom environments. Role-playing as different characters in hypothetical scenarios enables learners to empathize, problem-solve, learn by doing and apply knowledge into different contexts whilst engaged in a low risk environment. In this study, Virtual Designer, a 3d digital role-playing game was developed and play-tested by students to determine the effectiveness of the game in overcoming 2 common learning challenges, identified through student feedback. The first identified learning challenge was the difficulty students faced in applying theoretical design knowledge acquired from lectures and study resources (books, study materials, etc.) into practical application of their digital media projects. The second learning challenge was students lacked proficiency in the use of design vocabularies and design theory knowledge to confidently articulate, critique and communicate ideas.

This paper begins with an overview of traditional role-playing as a play activity, followed with character attachment and active engagement in different scenarios of role-playing games (RPG) for independent learning experience. The next section describes how the Virtual Designer uses common RPG game mechanics to establish an interactive and engaging simulated workplace environment for digital media students to role-play as design practitioners and apply acquired design theory knowledge into different scenarios. Research procedure and results would then be discussed. Results from data collection indicated that students agreed that the use of Virtual Designer enabled opportunities to apply design theory knowledge into practical settings and improved their design vocabulary skills.
2. Role-play

2.1 Overview

The practice of role-playing stemmed from a history of usage across a diverse range of fields, such as drama, psychotherapy, entertainment, education and training. Past literatures have sought to define role-playing as a play activity. Taking a broad view of analyzing different types of live and digital role-play, such as live action, tabletop or online role-play, Montola (2007) defined role-playing as “…an interactive process of defining and re-defining an imaginary game world, done by a group of participants according to a recognized structure of power.” Mäkelä et al. (2005) defined role-playing as “…any act in which an imaginary reality is concurrently created, added to and observed.” Pohjola (2003) defined role-playing as an immersive experience: “Role-playing is immersion to an outside consciousness (“a character”) and interacting with its surroundings”. These definitions reflected common attributes of role-play - an experience of interacting within a fictional world or setting through active immersive engagement of players (single or multiple) in portraying and defining characters.

From a historical perspective, role-playing was not deemed as a play activity. Psychiatrist Jacob Moreno first introduced role-playing as a treatment methodology in group therapy sessions during the 1920s, where patients sought to attain insights of emotional issues through reenactment of past events. In Aronson and Carlsmith’s (1968) “Role-Playing Study”, participants simulated behaviors as characters to confront hypothetical situations. Greco (2009) observed that this study sheds an insight on early didactic approaches used by past educators, where role-playing activities were not considered as a form of entertainment, but a potentially strong motivational factor to enhance students’ learning. Interestingly, such early uses of role-playing are notable as it challenges society’s pre-conceived notions that one’s ability and expertise in a subject area should be based solely upon academic merits. These uses of role-playing activities as an evaluative tool would later be translated into the field of education, in which educators use face-to-face role-play as a classroom activity to assess students’ knowledge-proficiency and accomplish learning outcomes. Through the use of role-play, skills and knowledge are put to the test at a practical level, thus assessing how individuals demonstrate their use of acquired skills and knowledge to resolve problems set within hypothetical scenarios.
2.2 Character Attachment in RPGs

Within a digital role-playing game (RPG) environment, players assume the role and control of one or more fictional characters (Tyschsen et al, 2006; Greco, 2009). Montola (2007) described that central to the process of role-playing are three key defining elements. The first is role-playing requires players to engage in the process of interacting and defining the fantasy game world, based upon their own intuitive understanding and interpretation on what this fictional world would appear to be like. This can be accomplished through various means. In the case of LARPs (live action role-play) for instance, it can be engaged through the use of speech, whilst for online RPGs, its channel of communication could be engaged through the virtual environment within the game itself. The second key element of role-play is based upon the hierarchical structure that is defined. Whether it is tabletop RPGs, LARPS or digital RPGs - there is often some power or rule-sets that are allocated and defined, which serves to establish an understanding on abilities and limitations of each player as they employ imaginary techniques to interact within the game world. The third defining element of role-play is the “anthropomorphic characters” portrayal by players. Players typically engage control in actions, feelings and thinking of their character, projecting human-likeness in the persona of anthropomorphic characters (Montola, 2007).

Williams et al (2011) maintained that RPGs players perceive and interact within the game world through the perspective of their controlled virtual character. Players create embodied representation of themselves and form strong connections with their characters, often retaining the same character for an extended length of time (Bessière et al, 2007). Character creation is often an embedded feature in most RPGs, where players would define the identity of their characters, such as race, class and name – many of which are fixed attributes that would later determine the character’s physical appearance, attire, skills and progression over time (Fron et al, 2007). Bessière et al (2007) described that such character-creation feature enables players the ability of creating characters which projects physical and psychological aspects that they aspire for themselves in their “ideal self”, adding that this process of character creation is further encouraged as audience or collaborators “by the fact that player has an audience and collaborators who have no prior knowledge of the player or his real-life situation.” This view of players creating fantasy personas of themselves is consistent with Taylor’s (2003) discussion on the topic of dress-up play in games:

“MMORPGs give the user (in varying degrees) an opportunity to engage in various
identity performances and corresponding forms of play. Both because of the explicit nature of the space (role play) and the engagement with avatars, users can construct identities which may or may not correlate to their offline persona... Through the early decisions players make about their race and class they begin to fashion of themselves unique identities in the gamespace.”

Yet, the player-character connection via RPG gameplay goes beyond the game mechanic of making superficial changes to the character, such as physical attributes, costume selection, occupation, race, etc. Past literature have sought to address complex emotional connections and attachments RPG players experience with their game characters. Lewis et al (2008) maintained that key to an RPG gameplay experience is its immersive nature of allowing players to engage within the game world and playing the persona of their characters – a phenomenon referred as “character attachment”. Based off theories on audience-character interaction, Lewis et al (2008) defined character attachment with the following four attributes: “(a) friendship and (b) identification with a video game character when an individual (c) is willing to suspend disbelief, (d) feels responsible for the game character, and (e) feels in control of the game character’s actions.”

Character attachment particularly applies to RPGs, given its distinct features which places heavy focus on character growth and narratives (Bowman et al, 2012). Smahel et al (2008) described how a player’s relationship with a game character is akin to a relationship with absent people in real life - whilst the game character is similarly absent and exudes an artificial sense of feeling, they stressed that players’ feelings towards the character is essentially genuine. This point of view is often linked with studies of the Parasocial Interaction Theory (PSI), which describes how intimate emotional connections are established when audiences are exposed to fictitious characters (Lewis et al, 2008), developing a unique sense of identification and fantasization of being a different person. However, Bowman et al (2012) stressed that this conceptualization of PSI has shifted, as variations between players and characters are not as prominent in video game environments. Drawing comparisons with traditional media such as televisions or movies, Jin and Park (2009) argued that new media such as video/computer games or virtual reality technologies elevates parasocial relationship to a different level, enabling users to not only see visual representations of themselves in the form of animated avatars, but also actively engage and interact within the media environment, thus establishing a “parasocial relationship” with their created characters. As such, in interactive media environments, the interaction which users experience with virtual characters forms a
distinctly different parasocial relationship (Jin and Park, 2009), although this may not apply specifically to fictional characters in interactive video games (Lewis et al, 2008) - players experience a tangible relationship with their fully interactive digital character instead. The video game experience extends beyond character identification and emotional connection, as players are stimulated to present themselves within the game world using their characters as virtual mediators (Bowman et al, 2012).

Active player engagement in different scenarios enables role-playing participants to learn independently from experience - akin to Dewey’s experiential learning approach (Balzer, 2011). As such, abstract subject matter content could be framed and presented through role-play to address cognition and emotion, increasing knowledge retention and enabling participants to process their experiences at an increased level (Balzer, 2011). Bowman (2010) noted that different outcomes of hypothetical situations could be predicted through scenarios in role-play, essentially addressing possible difficulties, advantages and consequences that entails from a player taking different series of actions. Through scenarios, players are placed in challenging situations and tasked with tackling problems that necessitates the use of critical analysis skills to resolve. In addition, players need to consider available options, resources and strategize accordingly to problem-solve the situations at hand. Essentially, this solution-seeking process in role-playing is conducted within a safe and low-risk environment, with skill training often set as a simultaneous learning goal (Bowman, 2010).

3. Virtual Designer

*Virtual Designer* was designed and developed over an 8 months project timeline through a collaborative effort of lecturers, game developers and animators based in Vietnam, Australia and England. Through in-game scenarios and interaction with virtual characters, this 3d role-playing game provides an immersive and interactive low-risk environment for students to role-play as design practitioners. In ensuring all game tasks and objectives of *Virtual Designer* are aligned with formal educational objectives, the instructional design of the game was based on collective input from lecturers, course materials and formal university course guides of two foundational digital media courses – Design for Digital Media 1 (DDM1) and Design for Digital Media 2 (DDM2). It is imperative to note that *Virtual Designer* was not intended as a didactic e-learning tool to replace traditional teaching methods such as lectures and tutorials, but rather, to act as a bridging tool for students to reinforce, transfer and apply abstract theoretical knowledge into different hypothetical situations to solve
real-world design tasks and problems within a simulated workplace environment. As such, students are expected to have already acquired an adequate level of subject-matter knowledge through formal classes (face-to-face lectures and tutorials) before playing *Virtual Designer*.

The game mechanics of *Virtual Designer* are based on common mechanics in games in the RPG genre, such as avatar creation and customisation, main quests and side quests, progressive character growth through accumulation of experience points, non-linear narrative, etc. Students begin the game by creating and customising a unique avatar, defining attributes of the character such as name, gender, appearance and attire. Through the avatar, students role-play as a design intern and navigate around the game environment, set in a design studio. Non-playable characters (NPCs), consisting of colleagues, managers and clients are positioned in different areas of the studio. Interacting with these NPCs will prompt design-related conversations or initiate missions within the game. For instance, when one NPC was spoken to, she relays to the player that a client was on the phone and had some printing-related inquiries. Accepting this task would entail in a series of questions which tests student’s working knowledge on the subject of printing. For example, the client shows a picture of a business card, inquiring what kind of printing technique might have been used - in which students should correctly identify it as the “foil stamping” technique.
Core to the game are 3 main scenarios. Upon entering each office, players are presented with 3d cut-scenes, where managers or colleagues required player’s assistance in solving design problems. The tasks are based on design theories students have learned in DDM1 and DDM2 classes, such as colour theory, printing theory, typography, design principles, etc. In one scenario, the player is asked to pick a logo design that fits the design brief requirements and pitch the chosen design to 2 clients in a meeting room. To increase authenticity, voice actors were used for all scenarios and both clients spoke in a very convincing conversational manner. Character expressions, responses and follow-up questions, changes dynamically based on player’s ongoing performance within the scenario. Pitching a poor logo design for example, will prompt both characters - Paul and Joan to turn around and look at each other, appearing unsatisfied with the design. They proceed to critique the design:

Paul: I’m quite concerned about this typeface. Look, the Fs in the name look like Ps in the text. Our brand name is important and we can’t risk any chance of it being misread.

Joan: Yeah, I agree with Paul. It’s going to be even more problematic if this is printed at a smaller dimension……say……on business cards.

Figure 2 – Main scenario situated in a meeting room, where players are required to pitch a logo design successfully to 2 clients.
As the player justifies the design rationale of the logo, further follow-up questions would be asked by Paul and Joan, testing the player’s design theory knowledge in a practical context. In one instance, Paul asks: “Our logo will be displayed at varied sizes. From very large billboards to the size of a business card. How good is the scalability of this logo design?” 5 different responses are available for players to choose – the correct response being the type choice used has good legibility and readability, both “legibility” and “readability” in this context are formal design vocabularies used in the topic of typography, referring to the recognisability of individual characters and the ease of words being read. Throughout the scenario, players need to provide correct responses to clients’ questions. The outcome of the scenario varies, based on the players’ overall performance. Answering most questions correctly will lead to a positive outcome, with both clients happy with the overall presentation and convinced that the logo design was ideal for their company. A poor performance however entails in two very unhappy clients rejecting the logo design and requesting to speak with the boss the following day.

After each scenario was completed, players receive a progress report and a grade. Points are also accumulated or deducted on a character growth bar based on players’ performance. Filling up the growth bar would lead to a promotion – from intern to junior design, senior designer, art director, etc. Conversely, emptying a growth bar from poor performances would lead to a demotion. This game mechanic is similar with the concept of accumulating experience points for character growth in RPGs, enabling students to track of their in-game progress. All scenarios could be attempted in a non-linear manner – players could complete scenarios in any sequence of their choosing, or in the event of an unsatisfactory performance - re-attempt scenarios again after a review of lesson materials. The game provides a safe environment for students to make mistakes, assess and progressively improve their design theory knowledge in practical and situated contexts, thus making learning meaningful.

4. Methodology

4.1 Data Collection

Data collection was conducted in Ho Chi Minh city, Vietnam from a sample size of 84 first year students in the Bachelor of Design (Digital Media) program. Both Design for Digital Media 1 (DDM1) and Design for Digital Media 2 (DDM 2) are first year courses (DDM1 being a pre-requisite course for DDM2) and covers foundational design principles, theories and technical design skills. The play testing of Virtual
Designer was situated as a class activity. Students completed 2 sets of tests prior and after playing the game in class. The pre and post-game tests consisted of 20 multiple-choice questions on design theory topics ranging from design principles, typography, print theory, etc., which students have already learned through prior face-to-face classes of DDM1 and DDM2. A paired-samples t-test was used to determine if there were significant differences between scores resulting from the two treatments (before and after playing Virtual Designer).

In addition to pre and post-game tests, students completed opinion surveys before and after playing Virtual Designer. The pre-game survey was designed to determine students’ level of confidence in different areas of design theories and soft skills (for instance, communicating using design vocabularies, pitching to clients, etc.), in addition to their opinions on overall learning effectiveness through traditional modes of learning in university such formal lectures and peer-to-peer discussions. In the post-game survey, students rated the learning effectiveness and engagement level of each main scenario in Virtual Designer and the overall effectiveness of different attributes and mechanics within the game in enhancing their overall learning experience. The pre and post-game surveys were rated through a 5-point likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). A rating of 3 is a Neutral response. Both survey sheets each ends with 2 open-ended questions, in which students could respond with written comments to provide additional qualitative feedback. Frequency tables were generated for collected responses to determine the counts and percentages of each likert-scale category. Percentages for “Agree/Strongly Agree” and “Disagree/Strongly Disagree” were counted as combined totals to determine overall agreement/disagreement in each response. Some individual questions were combined together as a unified set to address a specific aspect. For open-ended questions, qualitative responses were was organised through coding schemes. The frequency of each code were counted and presented as percentages to identify common themes that emerged from student responses.

4.2 Research Procedure

Students filled in pre-game tests and surveys at the beginning of class. This was followed with the lecturer explaining task objectives and learning goals of the activity to students. A brief gameplay demonstration was made by the lecturer, where user interface and navigational controls of the game were explained as students spent 10 minutes to accustom themselves with keyboard and mouse controls within the game environment. Students who faced difficulties navigating through the game interface
were promptly given individual assistance when required. Upon gaining familiarity with the game controls, students were instructed to proceed with completing all game tasks of *Virtual Designer*, which consisted of 3 main scenarios and 2 side tasks. The game-playing session lasted for the duration of 1 hour in class and students who struggled with instructions, gameplay or technical issues were promptly given assistance. After all the assigned game tasks were completed, students completed the post-game and post-test surveys.

5. Results

5.1 Pre/Post-Game Surveys

A majority of 48.8% students agreed that design theories are easy to understand through traditional lecture sessions, 21.5% disagreed, while 29.8% opted “neutral” as an answer. Students find face-to-face lectures are adequate pedagogical means to learn design theories without difficulties.

<table>
<thead>
<tr>
<th>Design theories easy to understand through lectures</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>84</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>5</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Disagree</td>
<td>13</td>
<td>15.5</td>
<td>15.5</td>
<td>21.4</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>29.8</td>
<td>29.8</td>
<td>51.2</td>
</tr>
<tr>
<td>Agree</td>
<td>37</td>
<td>44.0</td>
<td>44.0</td>
<td>95.2</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>4</td>
<td>4.8</td>
<td>4.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1 – Design theories are easy to understand through lectures.

Responses reflected a similar pattern when students were asked about learning design vocabularies. 35.7% of students did not find it difficult to learn design vocabularies through lectures (42.9% remained neutral). 41.7% of students agreed that they actively use design vocabularies during discussions with their classmates and lecturers in class.
Table 2 – Student survey responses on whether design vocabularies are difficult to learn through face-to-face lectures.

While majority of the students find face-to-face lectures and classroom sessions as adequate settings to learn design theory and vocabularies, results indicated that students faced difficulties when it came to application and transferal of knowledge into practical settings. 19.1% students agreed that they do not face difficulties applying design theories into their own practical design projects, while 35.7% disagreed.

Table 3 – Does students face difficulties applying design theories into their practical design works?

Similar pattern could be observed in responses when students were asked if they faced difficulties using design vocabularies to describe their projects effectively. 39% students agreed that they faced challenges, while 27.3% disagreed. 35.7% of the responses were neutral. Hence, based on results – while students feel that they are able to learn design vocabularies through formal classes and lectures without difficulties, actual use of the same vocabularies to articulate and describe their design projects is a challenge.
Table 4 – Does students face difficulties using design vocabularies to explain their design projects?

In the post-game survey, students were asked if they were able to apply different theories into practical situations when playing Main Missions 1, 2 and 3. Table 5 below indicates that a 73.8-75% majority of students agreed that they were able to apply all five design theories into practical situations when playing the scenarios in Virtual Designer.

Table 5 – Responses on whether Main Missions 1, 2 and 3 in Virtual Designer enabled opportunities for students to apply theoretical knowledge into practical situations.

A majority of 84.5% students agreed that they find Virtual Designer to be a useful learning tool. 69.1% students agreed that playing the game required them to recall design theories that were taught in previous classes. 78.6% students agreed that they would be interested in playing digital RPGs similar as Virtual Designer to assess their knowledge in other areas of design. Lastly, 72.7% students are in agreement that Virtual Designer is an engaging way to practice their design theory knowledge.
Table 6 – Did students find Virtual Designer useful for learning?

The pre-game survey contained an open-ended question: “As a design student, what aspects in design do you find the most challenging to learn?” In the process of analysing the data, categories were created with defined criteria. The total occurrences of responses that fall into each category were tallied to construct frequency distribution tables.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required me to recall previous design theory lessons</td>
<td>0</td>
<td>0%</td>
<td>6</td>
<td>7.1%</td>
<td>29</td>
</tr>
<tr>
<td>Find game to be a useful learning tool</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>2.4%</td>
<td>11</td>
</tr>
<tr>
<td>Interested in playing RPG to test knowledge in other areas</td>
<td>0</td>
<td>0%</td>
<td>7</td>
<td>8.3%</td>
<td>11</td>
</tr>
<tr>
<td>Find game to be engaging way to practice design theory knowledge</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>2.4%</td>
<td>21</td>
</tr>
</tbody>
</table>

Figure 3 - Learning challenges in design based on student responses.

Based on frequency count of open-ended responses, students find that the most challenging aspect of learning digital media courses was design theories, with 27% accounted to responses that refers to specific design theory topics and subjects. The second most commonly cited learning challenge was design skills (26%), which
includes practical and technical design skills such as drawing, branding, sound design, illustrations etc. The 3rd and 4th common responses are on idea generation (11%) and creativity (10%) when designing their projects.

5.2 Pre/Post-Game Tests

Results from post-game test indicated that students performed better in design theory tests after a session of using Virtual Designer (M=63.21, SD=20.544), in comparison with the pre-test condition (M= 56.79, SD=22.126). The post-test condition demonstrated a statistically significant mean increase of student test scores at 6.429 (95% CI, 3.293 to 9.564), t(83) = 4.078, p <.0005.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Pretest</td>
<td>56.79</td>
<td>84</td>
<td>22.126</td>
<td>2.414</td>
</tr>
<tr>
<td>Posttest</td>
<td>63.21</td>
<td>84</td>
<td>20.544</td>
<td>2.242</td>
</tr>
</tbody>
</table>

Table 7 – Paired sample statistics of pre-game and post-game tests

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Posttest - Pretest</td>
<td>6.429</td>
<td>14.449</td>
<td>1.577</td>
<td>3.293 to 9.564</td>
<td>83</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 8 – Paired sample tests

6. Discussion

Based on survey feedback - learning within classroom settings, such as lectures and tutorial sessions are adequate means for students to learn, understand and recall design theories and vocabularies. Conversely, when students were questioned about the use of design theories into design projects, responses skewed towards the negative side on the Likert scale. Students responded in a similar manner when asked about design vocabularies, with 39% of the cohort disagreeing that they were able to proficiently use design vocabularies to explain their projects effectively. Hence, results indicate that students are able to learn design theories and vocabularies through formal classes and lectures without difficulties, however – they struggle with applying their acquired design theory and vocabulary knowledge into practical application in digital media projects. On whether the use of Virtual Designer enabled students to apply design theories into practical settings through main mission scenarios, the
feedback has been positive and the majority of the cohort finds the game to be a useful and engaging learning tool to recall design theory knowledge and apply it into practical settings. Results from pre-test and post-test scores indicated a significant mean increase in the post-test condition, suggesting learning gain through the playing of Virtual Designer, effectively reinforcing students’ knowledge in design theories and vocabularies.

Biggs and Tang (2011) noted that traditional forms of classroom assessments or learning, such as paper-based quizzes or non-interactive lectures primarily leads to surface learning, where students have the tendency to employ rote memorization and verbatim recall techniques without fully understanding the learning content (but rather, provides false impression of attaining understanding in the subject). On the other hand, deep learning is deemed as a more desirable and effective learning approach, where students are motivated to focus on identifying “underlying meanings, on main ideas, themes, principles or successful application”, with the intention of engaging in tasks much more meaningfully and appropriately (Biggs and Tang, 2011). Virtual Designer serves as a platform for deep learning by challenging students with authentic problems often faced by practitioners in the design industry. When confronted with hypothetical scenarios, such as pitching a logo design to clients, preparing a document for print or answering client inquiries – through role-play, students tackle these real-world problems with a design practitioner’s mindset to apply design theory knowledge to formalise appropriate solutions. Continuous practice and successful application of design theory into different situations thus reinforces knowledge through experience, essentially making learning more meaningful. The design language used by characters reinforces students’ design theory knowledge and proficiency in communicating with vocabularies in a working context. The game provides a safe and engaging environment for students to make errors, gain positive and negative feedback and reattempt tasks if necessary. Different outcomes and dynamic responses from characters further add a layer of authenticity in students’ simulated role-playing experience within the game environment.

7. Limitations

Due to time constraint, the experiment in this study allowed students a duration of 60 minutes to play Virtual Designer. Although this timeframe is adequate for students to complete all required game tasks in class, it will be interesting to allow students further playing time to review lessons and reattempt scenarios outside class hours to determine learning gains of playing the game on a longer term. Students were
generally enthusiastic over playing Virtual Designer in class, but this could be attributed to possible novelty factor in the use of 3d games during design classes. Further play testing sessions would be essential to determine if students’ engagement level and learning gains deteriorate upon additional playing sessions of the game.

8. Conclusion

Within the confines of a classroom environment, constraints often occur in traditional modes of learning and assessments in enabling students to effectively understand abstract representation of design theories and actively apply acquired knowledge into authentic real-world contexts. By enabling students to role-play as design practitioners, results indicated that Virtual Designer is an effective platform for transferal of design theoretical knowledge into practical contexts within a simulated workplace environment. Role-playing through the use of digital games shows promise as an engaging supplementary tool to bridge the gap between traditional modes of learning (lectures and tutorials) and practical application of acquired theoretical knowledge into different situated contexts for meaningful learning.

REFERENCES


An investigation on higher education students’ understanding and attitude on plagiarism

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ABSTRACT
The issue of plagiarism in higher educational institutions is not new, but it is an increasing problem. This increase can be attributed to the rapid growth of information and communication technologies (ICT). Contributing factors to this problem ranges from cultural difference, competitiveness, gender, low proficiency of English, lack of faculty staff and lack enforcement. The difficulties in identifying and reporting cases of plagiarism remain a conundrum facing many faculty members. It may stem from a lack of understanding of what plagiarism is, both among faculty members and students, which may influence students’ attitude towards plagiarism. This paper aims to investigate the extent of university students’ level of understanding of the concept of academic integrity and attitude towards acts of plagiarism. This preliminary study will use the quantitative survey method and then discuss the findings of the survey on the relationship of students’ understanding and attitude. The finding has significant implications for academic communities to develop and improve plagiarism prevention tools and penalty guidelines.


1. Introduction
Over the last ten years, the issue of academic integrity has been a main concern internationally. However, awareness on the importance of academic integrity in Malaysia is still in its inception. Little attention is paid to it in many levels. For example, two lecturers from a highly ranked local university were investigated for plagiarising a reference book but were only issued stern warning by the institution (The Sun Daily, 2009a, 2009b). Besides that, a recent study concluded that out of the top five public university in Malaysia, only two have a strong and clear academic integrity code (Zangenehmadar, Hoon, Abdullah, & Fung, 2015). This suggests that higher institutions of lower ranking will most likely pay less attention to the enforcement of a clear code for academic honesty. Also, it is a known fact that students in Malaysia is introduced to the concept of referencing and academic
integrity when they begin their tertiary education (Yusof & Masrom, 2011). Recent studies on incidence of plagiarism reported that the percentages of self-reported academic misconduct has increased over the years (Cochran, Chamlin, Wood, & Sellers, 1999; McCabe, 2005). A study in Malaysia also reported similar seriousness. In a study participated by students from three universities in Malaysia, findings show that students’ tendency to plagiarise is between the frequency of “sometimes” and “often” (Ting, Musa, & Mah, 2014). There are various attributing factors to academic misconduct, for instance, the lack of linguistic competencies required in tertiary education (Pittam, Elander, Lusher, Fox, & Payne, 2009), cultural difference (Hu & Lei, 2012) and lack of enforcement in universities (McCabe & Trevino, 1993).

Despite the gravity of plagiarism among undergraduates, only few studies are carried out in Malaysia. Existing literature mainly study the problem of plagiarism in public local university and fewer is conducted in private local higher education institutions. This research intends to contribute to the literature and explore a gap in the literature by investigating the correlation of two important elements of plagiarism among higher education students – understanding and attitude. More specifically, this paper aims to investigate the extent of students’ understanding of the concept of plagiarism and attitude towards plagiarism.

2. Literature Review

Although much attention is put on the issue of plagiarism in universities internationally, reported cases of plagiarism continue to rise. This increase can be attributed to the rapid growth of information and communication technologies (ICT), where everyone has access to the internet and information and data is vast and readily available (Chang, Chen, Huang, & Chou, 2015; Hu & Lei, 2012; Trushell, Byrne, & Hassan, 2013). However, ICT also makes plagiarism easy to detect. Plagiarism prevention tool like Turnitin.com makes it easier for universities to detect plagiarism cases among students (Goh, 2013; Stapleton, 2012).

There are many factors attributed to students’ tendency to plagiarise class assignment. Individual factors range from cultural difference (Hu & Lei, 2012; Teeter, 2014), ethical decision (Bennett & Roger, 2005; Quah, Stewart, & Lee, 2012), competitiveness (McCabe, 2005), gender (McCabe & Trevino, 1993; McCabe, 2005) to low proficiency of English (Hu & Lei, 2012; Stapleton, 2012; Teeter, 2014). Institutional factors range from lackadaisical attitude of lecturers towards reporting of plagiarism (McCabe & Trevino, 1993; McCabe, 2005) and lack of enforcement from the management (Bennett & Roger, 2005; McCabe & Trevino, 1993; McCabe, 2005; Walker, 1998)
Plagiarism, in a broad sense, is defined as the act of “taking someone else’s work or ideas and passing them off as one’s own” (Oxford Dictionary, 2015). At a complex level, plagiarism can be defined as “the act of taking an idea, writing, data or invention of another person and claiming that the idea, writing, data or invention is the result of one’s own findings or creation; or an attempt to make out or the act of making out, in such a way that one is the original source or the creator of an idea, writing, data or invention which has actually been taken from some other source” (Kow et al., n.d.). On a complex level, plagiarism is more than copying another person's words. Plagiarism can also be understood as four different types: (a) Patchwork plagiarism, which is the common patching different ideas from various sources, (b) copying from another student, (c) submitting previously submitted assignment as new and (d) buying articles from someone or the internet (Goh, 2013). Patchwork plagiarism, be it minor or major, is the most common occurrence among students.

The increase in plagiarism is shared by every institutions, including those in Malaysia, especially when ICT facilities is also advanced now. The difficulties in identifying and reporting cases of plagiarism remain a conundrum facing many faculty members. It may stem from a lack of understanding of what plagiarism is, both among faculty members and students, which may influence students’ attitude towards plagiarism. Regardless, universities and higher education institutions should address the issue of plagiarism to continue offering future graduates quality education.

3. Methodology

This pilot study is conducted through a quantitative survey questionnaire. Students pursuing diploma and degree at a mid-size private higher education institution in Malaysia are selected via convenience sampling and the result is collected and analyzed. The survey questionnaire comprises of three sections. Section A looks at students’ demographic profile such as gender, age and ethnicity. Section B consists of twelve adapted questions to suit local students’ context, on students’ understanding of the concept of plagiarism by providing various behaviours which may or may not constitutes plagiarism (Marshall & Garry, 2006). Section C also consists of twelve questions on students’ favoured attitude towards different scenarios of academic misconduct (Harris, 2001). Eighty student responded out of one hundred questionnaire distributed.

4. Findings

4.1 Section A

In this section, the summary of students’ demographic information is presented in
Table 1. The demographic information includes gender, age and ethnicity.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>52</td>
<td>65%</td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>19</td>
<td>23.8%</td>
</tr>
<tr>
<td>20-24</td>
<td>57</td>
<td>71.3%</td>
</tr>
<tr>
<td>25-29</td>
<td>4</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muslim</td>
<td>9</td>
<td>11.3%</td>
</tr>
<tr>
<td>Buddhist</td>
<td>35</td>
<td>43.8%</td>
</tr>
<tr>
<td>Christian</td>
<td>23</td>
<td>28.7%</td>
</tr>
<tr>
<td>Others</td>
<td>13</td>
<td>16.3%</td>
</tr>
</tbody>
</table>

4.2 Section B
In Section B, students are provided with twelve examples of plagiarism. These examples are adapted from Marshall and Garry (2006) to suit local context.

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Responses</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>Probably</td>
</tr>
<tr>
<td>1</td>
<td>Copying the same words from another source without proper citation</td>
<td>80%</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Copying the same words from another source with referencing</td>
<td>18.8%</td>
<td>17.5%</td>
</tr>
<tr>
<td>3</td>
<td>Resubmitting an assignment that was submitted in one subject in another subject</td>
<td>33.8%</td>
<td>21.3%</td>
</tr>
<tr>
<td>4</td>
<td>Writing a new piece of essay structured according to an assignment brief, by referring</td>
<td>6.3%</td>
<td>16.3%</td>
</tr>
<tr>
<td>No</td>
<td>Question</td>
<td>Responses</td>
<td>Answers</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>5</td>
<td>Citing an original idea published in a secondary source and then citing only the secondary sources in your assignment</td>
<td>6.3% 13.8% 36.3% 30.0% 13.8%</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>Copying the organisation or structure of another assignment without appropriate reference or acknowledgement</td>
<td>45.0% 18.8% 13.8% 13.8% 8.8%</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>Changing the words from a source and presenting it as your own</td>
<td>33.8% 16.3% 10.0% 20.0% 20.0%</td>
<td>Yes</td>
</tr>
<tr>
<td>8</td>
<td>Paying someone to write your assignment and submitting it as your own</td>
<td>33.8% 11.3% 21.3% 10.0% 23.8%</td>
<td>Yes</td>
</tr>
<tr>
<td>9</td>
<td>Copying the ideas from a book/article without appropriate reference or acknowledgement</td>
<td>63.7% 12.5% 13.8% 3.8% 6.3%</td>
<td>Yes</td>
</tr>
<tr>
<td>10</td>
<td>Creating a new essay on the same theme as written by someone else but in a new context and without copying the existing one</td>
<td>7.5% 22.5% 16.3% 15.0% 38.8%</td>
<td>No</td>
</tr>
<tr>
<td>11</td>
<td>Using a book/article to identify useful secondary citations and then citing the original idea published in the book/article without reading the cited material</td>
<td>7.5% 17.5% 40.0% 28.7% 6.3%</td>
<td>Yes</td>
</tr>
<tr>
<td>12</td>
<td>Copying short sentences or phrases from another source and changing some words from the original source without referencing</td>
<td>28.7% 30.0% 16.3% 16.3% 8.8%</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Students are given examples that may or may not constitute plagiarism (Table 1) to indicate whether they think these actions are considered as plagiarism based on their understanding. An overview of the result shows that students have above average understanding of plagiarism, where majority of 9 questions are identified as offences and non-offences from 12 questions. However, only two clear case of plagiarism are clearly and correctly identified as plagiarism; 90% identified Question 1 as plagiarism and 76.2% identified Question 9 as plagiarism. Question 7, another basic example of plagiarism, discusses the need for referencing when changing words from a source and receives relatively similar percentage of 50.1% for Yes/Probably Yes and 40% of Probably Not/No, illustrating that students are not aware that referencing is needed even when they paraphrase ideas from another source in their own work. Other than that, students’ knowledge of plagiarism is particularly limited with regard to secondary sources as the majority answered Question 5 and 11 as unsure.

4.3 Section C
In Section C, students are provided with twelve scenarios with regards to plagiarism where students are expected to act upon. These examples are adapted from Harris (2001) to suit local students.

**Table 3: Students' attitude towards plagiarism**

<table>
<thead>
<tr>
<th>No.</th>
<th>Scenarios</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sometimes I feel tempted to plagiarize because my friends are doing it.</td>
<td>3.8%</td>
<td>12.5%</td>
<td>20.0%</td>
<td>35.0%</td>
<td>28.7%</td>
</tr>
<tr>
<td>2</td>
<td>I believe I know accurately what is considered plagiarism and what does not.</td>
<td>20.0%</td>
<td>40.0%</td>
<td>31.3%</td>
<td>7.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>3</td>
<td>Plagiarism is as bad as stealing the final exam questions and memorizing the answers before exam.</td>
<td>26.3%</td>
<td>35.0%</td>
<td>22.5%</td>
<td>10.0%</td>
<td>6.3%</td>
</tr>
<tr>
<td>4</td>
<td>It isn’t wrong if my coursemate gives me permission to use his or her paper for one of my subjects</td>
<td>6.3%</td>
<td>12.5%</td>
<td>26.3%</td>
<td>30.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>5</td>
<td>Plagiarism is acceptable if the lecturer gives too much work in the</td>
<td>1.3%</td>
<td>5.0%</td>
<td>20.0%</td>
<td>31.3%</td>
<td>42.5%</td>
</tr>
</tbody>
</table>
Students are given examples that may or may not constitute plagiarism (Table 1) to indicate whether they think these actions are considered as plagiarism based on their understanding. An overview of the results shows that students have above average understanding of plagiarism, where majority of 9 questions are identified as offences and no offences from 12 questions. However, only two clear cases of plagiarism are clearly and correctly identified as plagiarism; 90% identified Question 1 as plagiarism and 76.2% identified Question 9 as plagiarism. Question 7, another basic example of plagiarism, discusses the need for referencing when changing words from a source and receives relatively similar percentage of 50.1% for Yes/Probably Yes and 40% of Probably Not/No, illustrating that students are not aware that referencing is needed even when they paraphrase ideas from another source in their own work. Other than that, students' knowledge of plagiarism is particularly limited with regard to secondary sources as the majority answered Question 5 and 11 as unsure.

### Table 3: Students' attitude towards plagiarism

<table>
<thead>
<tr>
<th>No.</th>
<th>Scenarios</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>The punishment for plagiarism in our university college should be light because we are still young and learning.</td>
<td>12.5%</td>
<td>25.0%</td>
<td>25.0%</td>
<td>28.7%</td>
<td>8.8%</td>
</tr>
<tr>
<td>7</td>
<td>If a student buys or downloads free a whole assignment and submit it as his or her own, the student should be expelled.</td>
<td>13.8%</td>
<td>20.0%</td>
<td>33.8%</td>
<td>22.5%</td>
<td>10.0%</td>
</tr>
<tr>
<td>8</td>
<td>Plagiarism is against my moral values.</td>
<td>22.5%</td>
<td>38.8%</td>
<td>27.5%</td>
<td>6.3%</td>
<td>5.0%</td>
</tr>
<tr>
<td>9</td>
<td>Because plagiarism involves taking another person's words/ideas and not his or her house or money, plagiarism is acceptable.</td>
<td>3.8%</td>
<td>2.5%</td>
<td>18.8%</td>
<td>37.5%</td>
<td>37.5%</td>
</tr>
<tr>
<td>10</td>
<td>It's okay to submit something as a new assignment although you have submitted in the past because you can't plagiarize yourself.</td>
<td>10.0%</td>
<td>20.0%</td>
<td>40%</td>
<td>23.8%</td>
<td>6.3%</td>
</tr>
<tr>
<td>11</td>
<td>If I lend a paper to my coursemate to look at, and then the coursemate submits as his or her own and is caught, I should not be punished also.</td>
<td>31.3%</td>
<td>33.8%</td>
<td>23.8%</td>
<td>7.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>12</td>
<td>If students caught plagiarizing received a special grade for cheating (such as an FP - Fail for Plagiarizing) on their academic transcript, that policy would prevent many from plagiarizing.</td>
<td>23.8%</td>
<td>37.5%</td>
<td>32.5%</td>
<td>5.0%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

Twelve scenarios are provided to students to examine how they view each situation (Table 2). These scenarios tackle several themes like obvious plagiarism cases, less clear plagiarism cases and mode of punishment/deterrent. The summary shows that students have relatively positive attitude towards plagiarism. 61.3% and 75% of the students agree that plagiarism is as bad as cheating in examination (Number 3) and stealing another person’s money or house (Number 9). 55% believe that it is wrong to reuse other course mate or senior’s ideas in their own assignment (Number 4) and
73.8% disagree that plagiarism is justified when students’ workload is too heavy (Number 5). Although 60% of students answered that they know accurately what is considered plagiarism and what doesn’t (Number 2), their opinion is divided in regard to buying assignments or obtaining assignments from the internet (Number 7) and self-plagiarism (Number 10). 33.8% agreed that students caught buying essays should be expelled while 32.5% disagreed. 30% agreed while 30.1% disagreed that submitting an essay written for previous class is fine.

Besides that, although 37.5% students both agree and disagree with light punishment for students caught plagiarizing (Number 6), 65% said that punishing students with a special grade for the particular subject is acceptable (Number 12) and 65% of the students think those who are indirectly implicated for copying another course mate’s work should not be punished (Number 11).

5. Discussion

Generally, the results show that students have a basic knowledge of what constitute plagiarism (Table 2). Students can identify blatant cases of plagiarism (Question 1 and 9). For example, Question 1 is the only question with a score of 90% among students, which is the basic understanding of plagiarism.

For questions on plagiarism that are more complex, students display average understanding of plagiarism (Question 2, 3, 4, 6, 7, 8, 10 and 12). Only 50.1% recognize paraphrasing without referencing as a no sense while 55.1% identify self-plagiarism as a form of plagiarism.

Also, students are quiet inexperienced about citations for secondary sources (Question 5 and 9). Only 20.1% identify the need to plagiarize in secondary resources and 25% understand that citing secondary resources as primary resources is an academic misconduct. In addition, 36.3% and 40% students said they are not sure about the two scenarios above, representing the highest percentage of uncertainties among twelve questions.

This result is consistent with other researches on plagiarism in Malaysia which reported an unsatisfactory level of understanding among university students in Malaysia (Ali, Ismail, & Tan, 2012; Yusof & Masrom, 2011). This lack of understanding can be influenced by several factors, for instance, lack of training in academic writing skills and referencing skills (Yusof & Masrom, 2011). Academic writing and referencing skills are taught to students when they first join universities and this class is usually combined with study skill classes. This is clearly insufficient. Besides that, it can also be influenced by students’ weak English language. There is a sharp decline in English among Malaysian students, which is made worse because current students’ national examination scores for high school leavers do not reflect
standard level of English (Mahavera, 2014).

Next, result from this study also shows that students have a generally positive attitude towards blatant plagiarism (Table 2). 60% students are confident that they understand what plagiarism is about (Number 2), which is a reflection of average percentage for questions asked in Table 2. Students generally takes academic integrity and authorial identity seriously; 61.3% and 75% of students indicate that plagiarism is as bad as cheating in exam (Number 3) and stealing and fraud (Number 9), 55% state that collusion is not acceptable (Number 4) and 73.8% agree that heavy workload is not an excuse to plagiarize in class assignments (Number 5).

Apart from that, students’ attitude is relatively neutral, most probably due to simple understanding of what constitute plagiarism, as displayed in Table 2. 40% of students report a neutral attitude in self-plagiarism (Number 10) and this attitude reflects students’ lack of understanding of self-plagiarism as a form of plagiarism in Table 2 (Question 3). Also, 33.8% of students are neutral about buying or downloading free assignments and submitting as their own (Number 7). This uncertainty or disinterest can be attributed to students’ understanding of paying someone to write in Table 2, where only 45% agree that this is a form of plagiarism (Question 8).

Students’ attitude towards punishment of plagiarism is also reflected in Table 3, where they generally agree that punishment is necessary to deter plagiarism. 61.3% agree that students should get a special grade on their transcript which records and reflects the attempt to plagiarize (Number 12) but they remain divided in harsher punishment (Number 6). In addition, students are generally cautious of collusion; even though they agree that using another course mate’s idea as their own is wrong (Number 4), they indicate that students who share their ideas should not be punished as well (Number 11).

In summary, students’ attitude towards plagiarism is positive and regards plagiarism as comparable to misconduct like cheating in examination and crime. However, when faced with more complex scenarios, students’ attitude reflects their lack of understanding towards plagiarism. As an example, students most probably know plagiarism is wrong and may know peers who commit it but they do not do anything about it. This is reflected in Number 12 where majority agree and welcome the notion of a special fail grade for students who plagiarize. This supports studies that if students know they can get away with plagiarism, they most probably do not view it as a serious offence (Mccabe & Trevino, 1993; McCabe, 2005; Quah et al., 2012).

Students’ indifference towards presentation of another students’ work as one’s own as a form of plagiarism also confirms a lack of respect towards one’s own written work and authorial identity among students (Pittam et al., 2009). Students seem to regard their projects as having a higher reputation than their written essay, therefore it is
easier for them to show their assignments to their peers. This is mostly due to students having the perception that written assignments do not contribute to their learning in universities or there is a lack of uniqueness in their written assignments when everyone in the class is writing about the same topic.

6. Conclusion
This study confirms that the understanding of plagiarism among private university students in Malaysia is at a basic level. This influences their attitude, which is generally positive, especially towards scenarios that displays blatant plagiarism. Students relatively agree that a clear punishment is needed to deter plagiarism but want punishment to remain at a reasonable level, most probably due to the disregard of authorial identity or ownership of written assignment.

Studies have shown that plagiarism detection tool may not necessarily deter plagiarism (Buckley & Cowap, 2013; Goh, 2013; Stapleton, 2012) therefore other measurements should be considered when addressing the increase of plagiarism among Malaysian students. One suggestion is to enact a comprehensive honour code in universities to emphasize on the importance of academic integrity and define plagiarism from the basic to complex level (McCabe & Trevino, 1993; McCabe, 2005). Another way is to instill the notion of authorial identity and ownership of one’s own work (Pittam et al., 2009) so students will regard their own work with high regard and protect their own intellectual property.

REFERENCES
Trushell, J., Byrne, K., & Hassan, N. 2013. ICT facilitated access to information and


Abstract: Revisiting the writing process

The most common method for teaching writing over the past 35 years has been the Process Approach. Because it focuses on developing the thoughts and ideas of student writing, rather than product and mere grammatical correctness, it more accurately reflects the way professional writers compose.

This presentation will discuss the three stages of the writing process: brainstorming, drafting, and revision. It will offer some useful tips on how to get the best out of your students, helping them to overcome common obstacles, and preparing them not just for academic writing, but for lifelong career expectations and professional skills.
Student Working in Interdisciplinary Group: A technology-enhanced authentic learning

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ABSTRACT
The future demands critical thinkers, media literate people who are confident in applying appropriate life skills to fully participate in the media-saturated, information rich society. In fulfilling the mandate of educating graduates who possess knowledge and skills of general education and specific expertise of their major and interests, college educators continue to implement innovative approaches, including the AAC&U’s high impact educational practices (HIPs), in their teaching. With technology becoming an inherent part of students’ lives, College Composition instructors have also incorporated technology, including Web 2.0 tools, while capitalizing on their students’ digital literacy and technical dexterity. In so doing, they facilitated the students’ development of rhetorical proficiency to become active and critical participants in the technology saturated 21st century and beyond.

Student Working in Interdisciplinary Group (SWIG) illustrates a technology-enhanced pedagogy that fosters collaborative interdisciplinary learning. This technology-enhanced version of collaborative assignments and projects (CAP) engages students in authentic learning experiences where they perform an interdisciplinary collaboration using the wiki tools of the learning management system while actively self-regulating their learning and continuously reflecting on their learning process and progress.

This article discusses a SWIG project that assigned students in a College Composition course to collaborate with students from other disciplines and produce digital projects. This interdisciplinary project facilitated the development of writing skills, media literacy, and self-regulated learning habits. As they completed the project, students acquired the ability to synthesize multi-modal information in forming and producing an argument, and became reflective learners who were able to apply their learning and experience to new contexts on and off academic setting.

Keyword: authentic learning, multimodal composition, higher education, pedagogy, technology in education
1. Introduction
In the 21st century, technology has become an inherent part of higher education. Learning through and with technology is now common in many college campuses in many parts of the world. At the dawn of the new century, the Pew Internet and American Life Project survey of college students found that college students adopted technology early and used the internet heavily (Jones, 2002), and their habits include being digital, mobile, independent, social, and participatory (Lomas & Oblinger, 2006). A recent study by Educause’s Center for Analysis and Research (ECAR) confirmed the trend in that “technology is embedded into students’ lives, and students are generally inclined to use and have favorable attitudes towards [it]” (2014, p. 4). The majority of students in our classrooms today are digital natives who effortlessly navigate various social media platforms.

Educators have tried to incorporate pedagogy that enables them to capitalize on students’ digital literacy and technical dexterity in helping their students acquire a level of rhetorical proficiency to be active participants in the technology-dense era. Association of American Colleges & Universities (AAC&U) highlighted ten educational practices that bring positive and high impacts on students’ learning Kuh (2008). While there have been many studies on five of the high impact practices, Collaborative Assignments and Projects (CAP) has not been published as rigorously. This paper discussed a non-traditional CAP which utilized the collaborative tools within the college’s learning management system and other software to create digital projects. This technology-enhanced CAP engaged students in an authentic learning experience where they performed an interdisciplinary collaboration using the wiki tools, self-regulated their learning, were active in their knowledge acquisition, and constantly reflected on their progress and process.

2. Review of literature
Higher education institutions are expected to engage students in learning a broad knowledge of the world and an in-depth study of a specific area of interest that empower and prepare them to deal with the complexity, diversity, and change around them (Association of American Colleges & Universities, 2005). Former U.S. Secretary of Education, Arne Duncan, urged higher education to provide educational experiences that set students on a path to success by affording them the control of their future while also helping them thrive, support a family, shape the world, and contribute to their communities (Duncan, 2015). Accordingly, colleges strive to help their students develop a sense of social responsibility, strong and transferable intellectual and practical skills, as well as the ability to apply knowledge and skills in...
real-world settings. Many teaching and learning approaches, methodologies, and strategies have been proposed, implemented, assessed, and researched to find effective ways to achieve the educational objectives of the institutions. Authentic, integrative, and collaborative learning approaches have been recognized to engender experiences that bring the above desired learning outcomes

2.1. Authentic Learning

Authentic learning is often defined as a “pedagogical approach that allows students to explore, discuss, and meaningfully construct concepts and relationships in context that involve real-world problems and projects that are relevant to the learner” (Donovan, Bransford & Pellegrino, 1999 cited in Doyle, 2011). Like integrative learning, authentic learning helps students develop an understanding and a disposition across the curriculum and co-curriculum. Through authentic and integrative learning, students develop the abilities to connect ideas and experiences, as well as to synthesize and transfer learning to new, complex situations within and beyond the campus (Kuh, 2008). Authentic, integrative learning also demands collaboration and reflections, in that it “requires students to construct meaning and produce knowledge, inquire to construct meaning, reflect and discuss information, and create or perform tasks that have value of meaning beyond success in school” (Newmann & Wehlage, 1993 cited in Cydis, 2015, p. 69).

To enhance student learning, post-secondary institutions strive to move away from the teacher-centered model and implement innovative student-centered methods, such as the high impact educational practices (HIPs) (Kuh, 2008). Kuh argued that HIPs incorporated multilayered projects, fostered collaboration among students within and among their courses, and led to deep and authentic learning because they required students to spend more time on meaningful tasks and to actively communicate with faculty and peers. Several HIPs have been shown to bring positive impacts on student learning. Brownell & Swaner (2012) and Finley (2011) suggested that some HIPs—first year seminars, learning communities, undergraduate research, service learning, and capstone experiences—significantly improved persistence and graduation rates particularly among minority groups. Kilgo, Sheets & Pascarella (2015) found that collaborative learning and undergraduate research were significant, positive predictors for almost all liberal arts educational outcomes. More importantly, higher levels of success occurred when students participated in multiple high impact practices (Gagliardi, Martin, Wise & Blaich, 2015).
2.2. Collaborative learning

The 21st century demands creative and innovative people with the skills for critical thinking, problem solving, collaboration, and communication. Traditionally, after completing their general requirements, undergraduate students are conditioned to perceive the world through the narrow lens of their major, a classic academic silo within a higher education institution (Senge, 2006). To break this silo perspective that acclimatized students to think about content in separate spaces, many higher educational institutions adopted collaborative learning approaches.

Collaborative learning—a teaching-learning method where students work together in a group toward a common goal based on the premise that knowledge is constructed and transformed by students participate actively in the process (Dooly, 2008)—has benefited students academically, psychologically, and socially (Laal & Ghodsi, 2011). On a social level, the ability to work with others can help students complete the task at hand and beyond their educational experience. Analyses of future industry, labor and job market call for people who can understand, use, and integrate knowledge and methods to collaborate with teams across sectors and cultures. Moreover, at this technology-dense era, future work-force is also required to work in a team using technology tools. Seen from this perspective, collaborative assignments and projects (CAP) has the potential to bridge the academic silos by engaging students in interdisciplinary collaborative projects using technology.

2.3. Technology-Enhanced Learning

Technology continues to change how knowledge is acquired and applied; and incorporating technology in teaching has brought many benefits, including increased opportunity for interactions (Khatib 2014). As technology evolves and becomes an integral part of students’ life, it is logical to harness and incorporate students’ technology dexterity into teaching and learning processes. Colleges and universities have tried to replicate students’ social media existence and activities in the academic setting using the available Web 2.0 tools and applications. These web tools offer functions such as text- or image-based, audio, video, and multimedia production, digital storytelling, website creation, as well as knowledge organization and assessment (Lomas, Burke & Page, 2008; Bower, 2015). These Web 2.0 tools also make learning more interactive and accessible via multiple devices. Accessibility is important when incorporating technology in teaching as the latest Pew Research indicated that many minority students relied on cell phones, as opposed to desktops or laptops, to access the information on the internet (Lenhart, 2015).
The ubiquity of technology on college campuses has also impacted how teaching and learning are conducted. One Web 2.0 tool, the Wiki, allows collaboration among group members. Kalin (2012) illustrated that collaborative technology helped his students develop and sharpen rhetorical awareness and socially constructed knowledge. In their study, November & Day (2012) found that when using the collaborative tools, their students were less anxious in writing about unfamiliar subjects and were able to utilize more formal features and concrete description in their writing. With hundreds of Web 2.0 tools available, Lomas, Burke & Page (2008) advised institutions to select tools with features and capabilities that their institutions need rather than rushing into adopting technology based on popularity. A good collaborative tool, they argue, should promote communication while allowing natural interaction either via simple text, audio, and/or video; allow sharing of work including diagrams, photographs, paper and other objects; and have an interface that is easy to use and understand. Ease of use is important, as students generally regarded technology helpful only when it worked (Kalin, 2012).

2.4. Media Literacy
Despite the benefits, the hyper-technology era also poses serious challenges: cognitive overload (Palladino, 2007) and copyright infringements. With the internet dominating the landscape of how information is disseminated and acquired, we all need to know the appropriate and ethical approaches to navigating a myriad of sources and to using information. The media-saturated, information-rich, and technology-dense society requires critical thinkers who are media literate and possess the necessary life skills (Hobbs, 2010). The National Association for Media Literacy Education (NAMLE) describes media literacy as communication competencies sequence that includes the ability to access, analyze, evaluate, and communicate information in a variety of forms, including print and non-print messages (2015). Educators, therefore, need to not only select appropriate technology tools, but also develop a mechanism to avoid information overload or copyright infringement. They need to teach students to evaluate information for its accuracy and quality, to properly attribute and document the source, and to consider their conduct on social media realizing they leave their digital footprints.

2.5. Students Working in Interdisciplinary Group (SWIG).
One initiative at Queensborough Community College called Student Working in Interdisciplinary Group (SWIG) grew from an attempt to engage students in authentic learning experiences through collaborative projects. SWIG assignments engage students from courses in different disciplines to collaborate and exchange ideas using
technology, often asynchronously, while learning to recognize and apply different disciplinary lenses in their thinking (Byas, Cercone, Lynch, Miller & Wentrack, 2015).

SWIG started as Digital Storytelling Project in 2009/2010 academic year. When the college adopted Epsilen as the e-Portfolio platform around that time, the project moved the mainly face-to-face interaction to the Wiki of Epsilen. And the project changed its name to Student Wiki Interdisciplinary Group project (Byas, 2012). With the disappearance of Epsilen in 2013/2014, the project migrated to Blackboard Academic Suite—the official learning management system of all 22 colleges within the City University of New York system—which just added the Wiki function. The name of the project was also changed to the Student Working in Interdisciplinary Group to allow the use of other Web 2.0 tools and platforms as the space for collaboration in the future. At present, SWIG collaborative activities occur in a specially designated course site on Blackboard, usually named ‘SWIG + Year + Project#’, that is separate from the official course shells created for all courses offered by the college at any given semester. Students from the participating classes would self-enroll before the SWIG assignment begins.

A SWIG assignment can include Collaboration, Production, and Dissemination stages (see Figure 1). Depending on their curricular goals, some SWIG faculty would assign only the required first stage (Collaboration), while others assign the combination of stages one and two; and still others who assign all three stages.

![Figure 1. SWIG Process](image)

At the required Collaboration stage, students from all participating classes collaborate in the Wikis of a SWIG course site on Blackboard. The Production and Dissemination stages can occur within SWIG course site and utilize the same Wiki space, or they can
be in different format and platform altogether. A SWIG collaboration can result in various products: multimodal essays (Blake-Yancey, 2004), PowerPoint presentations, digital stories, websites, or performances.

In each SWIG Blackboard site, the members are divided into working groups whose members complete their tasks, mostly asynchronously, in the group’s Wiki space. The members will perform ‘mutual gift-giving’ (Darcy, 2012) by posting their contribution on the group’s Wikis for other members to review and edit. The group project evolves as members contribute textual and multi-media gifts which can come from their own experience or work (art, songs, lyric, etc.) or materials that they borrow from reliable sources (books, internet, movies, and songs). All members are required to attribute the gifts and to explain their reason for offering the gifts (Byas, 2011). Throughout the collaboration process, students will be engaged in critical reflections to consider what they are learning and how they are learning it.

3. Method
This paper focused on how Students Working in Interdisciplinary Groups (SWIG) exemplified a technology-enhanced Collaborative Assignments and Projects by forming communities of learners where members experienced authentic learning, created something together, and achieved the course learning outcomes. To be more specific, it discussed how participating in a SWIG assignment positively impacted student learning in the areas of collaboration, media literacy, and writing skills.

The SWIG assignment presented here started as a collaboration between students in an English class and a Speech class. Later, it evolved to include students from a Biology class. This SWIG team also participated in two other high impact practices: Common Read and Service Learning. For the Common Read, this SWIG team read Rebecca Skloot’s The Immortal Life of Henrietta Lacks and attended two campus-wide related events. For Service Learning, they designed a website as a resource for the Common Read on GoogleSite. The website featured their digital projects and projects produced by other Common Read participants. During the collaboration, I served as a mediator to help them handle the workflow and as a model for students who had difficulties completing some tasks.

The data for this report included the following items:
1. The group wiki threads in the SWIG course site on Blackboard.
2. Student reflections in separate Wiki threads on the SWIG site and/or the College Composition (EN101) course site.
3. The products of the SWIG collaborative assignment, mostly in the form of digital projects, in the SWIG Blackboard wikis.
4. Research paper students wrote towards the end of the semester in the Assignments section of the College Composition (EN101) course site.

Once the information was compiled, all identifiers (student names) were removed and the materials were then printed for content analysis. The Wiki collaboration and reflections were analyzed for keywords that represented collaboration (communication, task setting, negotiation, reminders), learning (change in attitude and knowledge, transfer of knowledge), and media/information literacy (selecting relevant information, and citing sources). While the products (multimodal essays, PowerPoint presentation, and digital projects) and research papers were analyzed for characteristics that matches the College Composition (EN101) learning outcomes set by the English Department (see Appendix 1).

4. Discussion
The data suggested that SWIG fostered authentic learning because it engaged students in an interdisciplinary collaboration, encouraged them to negotiate meaning and knowledge, developed media literacy, and turned them from merely consumers to prosumers of information and media. Realizing that there was a genuine audience for their work, the students took ownership of the assignment and exceeded expectations.

4.1. Collaboration
The SWIG collaboration involved students from three different classes and disciplines: English, Speech, and Biology.

<table>
<thead>
<tr>
<th>Group</th>
<th>Topic</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>1</td>
<td>Teen Pregnancy</td>
<td>Eng 1</td>
</tr>
<tr>
<td>2</td>
<td>Cancer</td>
<td>Eng 2</td>
</tr>
<tr>
<td>3</td>
<td>Cervical Cancer</td>
<td>Eng 3</td>
</tr>
<tr>
<td>4</td>
<td>Child Abuse</td>
<td>Eng 4</td>
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<tr>
<td>5</td>
<td>Hela in Medical Development</td>
<td>Eng 5</td>
</tr>
<tr>
<td>6</td>
<td>Religion &amp; Faith</td>
<td>Eng 6</td>
</tr>
<tr>
<td>7</td>
<td>Barrier &amp; Research</td>
<td>Eng 7</td>
</tr>
<tr>
<td>8</td>
<td>Racism &amp; Patient Care</td>
<td>Eng 8</td>
</tr>
<tr>
<td>9</td>
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<td>Eng 9</td>
</tr>
<tr>
<td>10</td>
<td>Incest</td>
<td>Eng10</td>
</tr>
</tbody>
</table>

Figure 2. Group assignment and the topics
At the beginning of the collaboration, there were 20 students in the English class, 19 in Speech, and 14 in Biology (Figure 2). The 53 students were divided into ten working groups based on the topic they selected after discussing the book in their own class. The general tasks were divided among the three disciplines: the English members led the drafting process; the Speech members led the digital production stage, and the Biology members led in providing and checking the accuracy of scientific gifts. Each group was assigned a Wiki where members collaborated mostly asynchronously by posting their textual/multi-media gifts on the group’s Wikis for other members to edit. The process illustrated that “Wiki-based writing projects also lend themselves to student collaboration and thereby provide additional opportunities for learning” (Rott & Weber, 2013, p. 179).

Each group created a few threads—draft, draft revised, PowerPoint (slides & script), recording, and video—in their respective group wikis, each denoted a step in their collaboration. For example, Group 1 worked on ‘Teen Pregnancy,’ and their collaboration began when one member from the English class created a thread entitled ‘Project Draft’ and proposed an outline for the project. Other members then reviewed and edited the thread using the assigned font color—English used brown, Speech used green, and Biology used purple (see Figure 3)—either by adding to the draft (see text in brown and purple) or commenting on the tasks (see text in green).
When all members already contributed ideas and the draft started to take shape, the English members created another thread entitled ‘Draft –revised’ and posted a clean revised draft for the members to finalize. In so doing, members offered media gifts (pictures, statistics, audio/video) which they searched using the SWIG Library Guide introduced in a Media Literacy workshop. Figure 4 shows two examples of students offering media gifts. Many students were often too eager to find media gifts and they would just copy and paste what they got from ‘google’ (picture on left). But after the Media Literacy workshop, they would include the necessary information (picture on right). Once the draft is finalized, the Speech members used the draft and the media to create PowerPoint slides and script.

The SWIG collaboration process was textured and demanded attention. The students were engaged in the task and were aware of what they posted since they had a real audience who would review their posts. In their role as editors, they “[pooled] their linguistic resources as well as their insights and knowledge about the content throughout all phases of writing, from brainstorming and drafting to the final proofreading stages” (Rott and Weber, 2013, 179). Throughout the collaboration, they learned and practiced negotiating meaning and ideas to reach a consensus as to how to develop the group project. Successful groups communicated, negotiated meaning, and reminded each other often and regularly as shown in the excerpt below:

- We could maybe try to add in some statistics about teen pregnancy we have right now in this country. Teen pregnancy can lead to abortion or lead to dropping out of school which can lead to unemployment and or minimum wage job like at fast food places. Also homelessness if parents aren’t as acceptable to the pregnancy, they might kick her out of the house. (Student 1)
- All the information here great to use for a presentation. Maybe talk about anything personally like someone you may know who got pregnant as a teenager. (Student 2)
Successful groups generally offered constructive and specific comments to the project. They referred to specific part in the project for easy reference as demonstrated in the following excerpt that took place while drafting the PowerPoint slides.

- … Good job. Nicely done. Every information is there. Double check there are some words spelled wrong with additional weird letters, and put picture citation under each slide. Who is doing the recording, have you guys chose[n] yet? (Student 1)
- Notes to make the PowerPoint stronger:
  - Add our names to the PowerPoint Presentation (English and Biology)
  - Add our research. It seems that there're little to none of our findings (English and Biology)
  - If blank, at least have a title to the slide(s)--so we know what information can be looked for, for that particular slide if there isn't any. (Student 4)

When offering gifts, they also provided specific details so that the other members would understand what each gift added to the project and what they needed to do to finalize the group project.

- I like the picture with the statistics on them. It is really informative. Tell me if you would like to see this picture on the PowerPoint. (Student 3)
- Hi, the powerpoint is good. It is just you have to add the citation. It’s organized well, in slide 6 you might have to either change the topic to Deborah’s pregnancy or separate that information from Henrietta’s part. Make sure each picture has citation in the bottom and in last slide … (Student 1)

Groups that were not as successful generally lacked communication. They were often late in responding to questions or suggestions, which could frustrate other members. When giving a gift, they often used vague language with no specific details. The excerpt below showed student giving a very general comment which in turn did not help the group to make improvement to the project.

- Hi (name) this is (name), thank you so much, [I] think [it’s] perfect. (Student 5)
- I did not like this swig collaboration. The reason for this is because I feel as if my group didn’t contribute to the project, other than my partner in the class. (Student 6)

In a collaborative project such as SWIG, some groups could fall apart when members do not contribute as expected. For example, one group completely dissolved when several members withdrew from their class and the remaining members had to be reassigned to different groups. I would help the students by sharing how my collaborators and I communicated with each other, managed our time by carefully planning the steps of our collaboration and emphasizing accountability. Using other relevant examples I also motivated them by explaining that working on the project helped them practice the skills they needed for their future education and career.
4.2. Media Literacy

Using the SWIG library guide (See Figure 5), the SWIG assignment also helped the students develop media literacy. The SWIG library guide provides important information on the concept of copyrights and fair use, reliable websites to search for appropriate gifts of different types, keeping track of the gifts they gather in their research, and the ways to identify and document the gifts they offer to their group.

Figure 5. SWIG Library Guide

Educause’s *The 2009 Horizon Report* pinpointed the need to formally teach information, visual and technological literacies in preparing students for the sophisticated global technology-rich culture (Johnson, Levine & Smith, 2009). I scheduled at least one Library workshop and allocated some class time to allow them to find relevant materials for the project. I found that having students take the information literacy workshops “bridge[d] unperceived gaps in knowledge, not least because they create a space for students to participate, and practice the necessary skills” (Higgs, Kilcommins & Ryan 2010, p. 6). The SWIG assignment helped my students develop critical thinking and I was able to help them when they face challenges, providing that they wrote them on their Wiki posts.

The SWIG assignment also brought another benefit for the students: it made the research process visible. During the drafting phase, SWIG participants learned to find information pertaining to their group’s topic from sources beyond Google or Wikipedia. Using the SWIG Library Guide, they practiced setting appropriate filters to get the most appropriate information they could legally use in their group project. Similarly, when revising the draft and having to offer media gifts for the group’s PowerPoint, they learned to set filters to get appropriate media for their project. Moreover, they also kept track of their research process and results using the Media Tracker template that they downloaded from the SWIG Library Guide. Figure 6 shows sample media tracker page created by the group working on ‘Teen Pregnancy’.
After finalizing the draft and having the necessary media, the group then worked on an informative presentation on the topic. When they created their PowerPoint slides, the group included a slide entitled Works Cited that listed for all the information and media that they borrowed. Despite some challenges with formatting and spacing, the students were able to document the borrowed information and media using the MLA format of a Works Cited slide with all appropriate information (see Figure 7).
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Students were not only learning important information about the topic, but they also learned the importance of good research skills and proper documentation in the MLA format. From the above descriptions, it is clear that the SWIG project contributed in the development of information and media literate students as defined by the National Association of Media Literacy Education (NAMLE).

4.3. Discipline.
Being members of the English Department, my main responsibility in teaching any College Composition (EN101) class is to help students develop their writing skills, which includes conducting research while meeting the Department’s learning outcomes below:

| After completing the College Composition (EN101) course, students are able to: |
|-----------------|---------------------------------|
| • Identify an intellectual question or problem worthy of further study; |
| • Use reading and writing for inquiry, thinking learning, listening and communicating |
| • Articulate a focused argument or line of thinking appropriate to the particular genre or form the writer is working in |
| • Utilize relevant evidence throughout all their writing tasks, including written texts, visual images, graphs and charts, electronic media and such primary sources as observations, interview and surveys |
| • Use a variety of writing and revision strategies for generating, revising, editing and proof reading their own and others’ writing |
| • Utilize appropriate logical structures and stylistic approaches appropriate to a form or genre of writing (transitional language, progressive development of ideas, etc.) |

As they prepared for, engaged in, and completed the SWIG collaboration, the students met the English Department learning outcomes: While reading *The Immortal Life of*
Henrietta Lacks, they picked topics that were worth further exploration; then as a group, they communicated their ideas in writing and collaboratively explored the group’s topic. During the collaboration, they refined their thinking based on the research they conducted and the information other members provided; they also practiced media literacy skills to search for, select, and use evidence (textual and multimedia) appropriate to the topic at hand. Throughout the process, students brainstormed, generated ideas, drafted, revised, edited, and proofread their group project to fit the structures and styles of the project they decided.

After visualizing and practicing the research process and the importance of documenting both text and visual sources in the required format, most students transitioned easily to working on a traditional research paper. The SWIG project helped the students develop media literacy, which is an important component in the English Composition class. My students were able “to apply critical thinking to evaluate information in the general context of problem solving; to reveal the complexity of things; to value intellectual honesty and to foster critical awareness about all types of authority” (Cronin, 2010, p. 98). Therefore, the SWIG assignment helped my students meet the Department learning outcomes as well as provides them with a strong foundation for writing and research skills that they could transfer to other settings, including a formal English 101 research paper and other courses.

4.4. Technology Use
The majority of the students in our classes are first generation virtual learners who come of age in a technology-saturated environment characterized by seamless interactions between the ‘real’ and the digital worlds. They are entrenched in “their” technology of social media and online gaming when creating and sharing knowledge. The SWIG assignment capitalized on the skills that the students already honed in their digital existence and modified them for use in academic setting.

A SWIG assignment utilized the wiki feature on Blackboard. Even though most students knew about and consumed information from Wikipedia, they were not as well versed in utilizing its collaborative capability. At the beginning, students had difficulty navigating the Wikis, especially since only one member could edit the wiki at any time. After some practice and discussion among members, the groups were able to navigate the Wikis relatively well. In the end, the Wikis on Blackboard served as an appropriate collaboration tool in that it was relatively easy for both the faculty and the students to use; it promoted communication while allowing natural interaction via simple text, audio, and video; and it allowed users to share diagrams, photographs,
paper and other objects (Lomas, Burke & Page; 2008). Most students have positive experience on using the wiki, while those who were not as technology-savvy often expressed frustration or confusion, particularly at the beginning of the project.

- Using the wiki this semester was very confusing at first. After using it multiple times my group and I definitely got the hang of it. (Student 7)
- The Wiki collaboration is easy way to share everything with the groups, and you can easily edit it on the same page. Everyone had chance to discuss the topic we are working on. (Student 1)
- The idea of the SWIG # Collaboration was not easy to understand at first and I did not like the idea of doing something like this. As time has gone on, I actually think that it is a good way to 'collaborate' with peers outside of our class. (Student 8)

Despite some challenges students experienced at the beginning, most students would write positive reflections towards the end, such as the following:

I was able to accomplish the first step of my overall goal by identifying the two most paralyzing challenges I was facing by putting them in their proper perspective. … I told myself that my fear of technology was really my ignorance of it. I acknowledged the fact and embraced each opportunity I had to learn more (Student 6)

- It was nice because I got to know someone from the class and I learned the way she like to work, another good thing about the collaboration was that she help me a lot to develop the ideas and made them make sense (Student 9)
- I have no complaints about the wiki group project. I enjoyed this project because I had a group who contributed equally although sometimes it was overwhelming we managed to narrow stuff down and be satisfied. (Student 10)

Students often indicated the importance of knowing the person they collaborated with, such as in the reflections that goes “The swig collaboration was a new experience because I ha[d] never done a group project with people I never met and seen” (Student 11) or “I honestly disliked this collaboration because working with two other classes that we don’t see…” (Student 12). However, even without the face-to-face interaction, SWIG collaboration helped in building community. Students who were busy with their family and work responsibilities often did not have time to engage in campus activities. As one student wrote, “SWIG allow[ed] you to view the opinions and work of everyone without having to physically taking the time to meet them face to face” (Student 13). Asynchronously working together and interacting with students from other classes helped them develop a sense of community, which might help in keeping them focused on school.
4.4. Digital Project

Some SWIG faculty participants assign the students to the second stage of the collaboration which is the production of a performative project which can take many different formats: multimodal essays, PowerPoint presentations, digital stories, acting or dance performances, or websites. For my class, each group created a digital project which started with *Microsoft PowerPoint* slides and script. When the slides and script were ready, the group recorded the script using *Audacity* and saved it as MP3 files. Then, they combined the slides and audio, and converted them into a video using *Camtasia Studio*. The digital project shifted students from information/media consumers to prosumers while expanding their use of technology as academic tools. It immediately placed the students as active participants in their learning where the end result was a real product. Over the course of several semesters, students have reported that they transferred the skills developed in completing a SWIG project to their other courses or workplace. At times, the finished project helped many students gain employment.

As mentioned earlier, as their Service Learning project, the SWIG team in 2013 created a website on *GoogleSite* for the Common Read. The website featured the digital projects they produced (See Figure 8).

![Figure 8. The Common Read website designed by a SWIG partnership](image)

Students from the participating classes worked in teams to design the layout of the website (Art & Design team), ensuring all uploaded materials met the legal criteria (Legal team), and ensuring all projects uploaded would work (Technology team). When the group wanted to borrow a picture from the Henrietta Lack’s family website, the legal team wrote an email requesting permission from the family, which gave...
them real-life experience on the issue of copyrights. The group then launched their website at one of the Common Read event, during which they invited other Common Read participants to submit their work for inclusion on the website.

At the beginning, many students complained about the many steps of the SWIG assignment and the three spaces they had to navigate: the course, the SWIG, and the SWIG Library Guide. They also whined about having to use the often non-intuitive interface of Audacity and Camtasia Studio when creating their digital projects. Such complaints were normal considering the complexity of a SWIG project, especially those that included the three stages. As Koszalka & Wang (2002) highlighted the importance of providing technology support for students and faculty when integrating technology into learning, we adhered strictly to the technology platforms supported by the Academic Computing Center (ACC) to ensure the students would have the support they need in completing their tasks and projects. When asked to reflect on creating a digital project, students wrote the following:

- This digital project represents all my challenges working with the computer... I never thought of myself as being creative, but the job had to be done and I did it! (Student 6)
- I really enjoyed doing the digital stories, especially for paper one. I found it interesting and I enjoyed my time completing it because it brought back memories from my past and allowed me to look at things from a different perspective. ...When you write a biography of someone, you tend to learn things you didn’t know about them. I felt the same way in making the digital story ... I feel like I got to know myself a little better. (Student 12)
- I love the digital story project. I felt that I had the opportunity to be very creative. Although I like live presentation, it’s only temporary. With the digital stories we are able to do so much more. I think that it would have been nice to present a digital story after each project because it would have been like second nature to us. (Student 8)

Authentic learning also includes the ability to transfer the skills learned in one setting to a different setting. Towards the end of the semester, some students wrote in their reflections how they would transfer the knowledge they learned in the course, especially from the SWIG assignment, as follows:

- … EN-101 has set the foundation for me to be successful in every other course. (Student 6)
- I’ve developed a good amount of knowledge in this course and was able to learn a lot of things, which have made my writing a lot better. (Student 12)
- The second item was about chapter 15…it was documented in such an interesting way it made me think about striving to write like the author. (Student 13)
4.6. SWIG’s other benefits

Many higher education institutions frequently use student retention, graduation, and transfer as a measure of students’ success. Queensborough Community College’s 2013 institutional data indicated that students who participated in SWIG consistently showed higher numbers (91%) in the retention, graduation, and transfer rates compared to students who did not (75%) (Ferdenzi & Abbott, n.d.). The data from a college-wide assessment of HIPs in the spring of 2015, showed that students participating in SWIG expressed higher agreement than the non-HIP students for the statements about reflections (7% higher), synthesis (14%), incorporate personal experience (13%), collaboration (17%), diverse background (13%), and involvements in college (17%) (Fichera, 2015). These institutional research data provided evidence that SWIG assignments included more activities and requirements, which in theory, engage students in deep learning. The reflections students made at the end of the semesters also showed similar trends, such as the following.

- This course surely affected my development as a writer and reader. … Some things that I learned in this class that I can take with me after the course is over and apply it to other classes, work, my daily life etc. is to have an open mind and ear to other people’s work. … From now on I will pay more attention to the work of others and maybe something interesting will catch my eye and I will be able to enjoy learning about new things much better. (Student 13)

- I believe that as a writer, I am growing throughout this semester by expanding on the types of literature I am working with. By the end, I have incorporated higher and in-depth thinking, invoking and conveying emotions, using observations and other information into my new pieces of work. (Student 14)

The survey results and sample excerpts showed that participation in the SWIG activities helped students see how what they learned might work in different settings, on and off campus, or as Kuh (2008) stated, it offered the opportunities to integrate, synthesize, and apply knowledge that would lead to deep, meaningful learning experiences.

Technological challenges that the students experienced while implementing the SWIG assignment inspired me to continue exploring various Web 2.0 learning technologies that would foster student learning of media literacy and disciplinary content, while balancing privacy and safety concerns. Some students often came to the project in fear of the unknown, including the technology, but with sufficient practice and support, they were able to use the technology and reinforce their collaborative and writing skills. Through constant reflections, students learned to assess their learning, identify the challenges and resolve problems that might stall their progress.
All things considered, SWIG is a good example of technology-enhanced collaborative assignments and projects. SWIG activities fit the AAC&U’s description of CAP in that it engaged students to work and solve problems in the company of others, while sharpening their understanding of the subject, topic, message, or project by taking seriously to the insights of others who come from different disciplinary lenses and experiences. Most importantly, most stages of any SWIG project are enhanced by technology: the collaboration utilized the Wiki of Blackboard; the production utilized software such as Microsoft PowerPoint, Audacity, and Camtasia Studio; and the dissemination was posted on the students e-Portfolios, the Course Wikis, a website they created, or YouTube.

5. Conclusion
My interest and confidence in SWIG came not from the impressive statistics, but mainly from what the students gained. The benefits students gained from the SWIG experience exceeded the challenges of making things work. The SWIG assignments incorporated technology to foster collaboration among students, engaged students to think creatively, to solve problems, and to make decisions as a team. Despite the many confusion when first introduced to the project, most students not only learned to use the “academic” technology, but also gained a sense of accomplishment and pride in the collaboration and the project they produced. The students also learned the academic skills for writing and research, and other skills such as group dynamics, time management, accountability, and self-regulation. In addition, students used technology to become prosumers, rather than merely consumers, of knowledge and media which addressed discipline specific learning outcomes. Projects such as SWIG are, without a doubt, an undertaking. Therefore, the Department and the College as a whole should provide the necessary support for faculty interested in implementing such projects.

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Stereotypes about Adults with Low Literacy Skills

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ABSTRACT

Adult Education research cannot find representative research samples in training institutions, as these institutions do not attract a representative mixture of the adults living in a state. Therefore either (expensive) large scale surveys have to be conducted for representative results or non-representative small scale studies are carried out with participants of Adult Education and Training. Often the classroom studies take place earlier when it comes to innovative, new issues. The more expensive large surveys take place some years later. This raises the question of the generalization of classroom target group research with participants: \textit{Is it allowed to draw conclusions from research conducted with participants in adult education, when research is searching for answers regarding the complete target group?}

This general question became viral in Germany with regard to adults with low literacy skills. Is it allowed to generalize participant research to the complete target group of low skilled adults or does that lead to stereotypes? Most knowledge about low skilled adults was driven from participant research (both qualitative and quantitative), and this was true for decades until the first level one survey (LEO, \(n=8.346\)) was launched in Germany. At the same time, a representative participant survey took place (AlphaPanel, \(n=500\)). This now allows the he statistical comparison of the AlphaPanel and the Level One Survey. The findings show that participant and non-participant adults with low literacy skills are rather different from each other. Conclusions drawn from participant research tend to repeat stereotypes that do not fit for non-participant adults with low literacy skills.

\textbf{Keyword:} Adult Basic Education, Stereotypes, New Literacy Studies, Target Group Research.

Main Description of Research

Large scale surveys like the Program of the International Assessment of Adult
Competencies (PIAAC) attract research interest to literacy skills and especially to subgroups at risk, with low literacy skills. But what do we know about low literate adults in western societies? Research about participants in adult basic education tells us that they are excluded from labor markets, most often are unmarried and face dissatisfying health conditions, live in segregated areas of our cities and report negative school experiences (Grotlüschen & Sondag, 2012; Lehmann, Fickler-Stang, & Maué, 2012). Does this pattern hold true for the non-participating low literate adults as well?

The statistical comparison of two major studies, the AlphaPanel (n=500, Rainer Lehmann & team, Berlin) and the leo.-Level-One-Survey (n=8,436, Anke Grotlüschen & team, Hamburg), shows how different participants and addressees are. When we look at these two large studies, the idea of the totally excluded adults with low literacy skills changes: The majority of adults with literacy needs, who do not enter adult basic education classes…

- does have a job,
- is married or living with a partner and have children
- remembers normal school experiences.

The findings show that the idea of excluded and deprived adults with low literacy skills might be a stereotype, maybe even a patronizing pattern of adult educators and researchers towards their target group.

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WhatsApp as a Successful Mobile Learning Tool for Student Collaboration in Project-Based Learning

Considerable research has shown the value of Inquiry Based Learning (IBL) in terms of engagement and motivation, depth of learning, and cognitive flexibility. IBL is often considered inclusive of Project-based learning and Problem-based learning and the overarching model for authentic student learning. Student collaboration is one component of authentic student learning since students must communicate and work together inside and outside of class time when engaging with the project. Choosing a mobile learning tool benefits student collaboration because the tool enables anytime and anywhere learning through collaboration. This study looked at how 96 female undergraduate students in a federal Emirati university chose to collaborate in a PBL assignment. They were given autonomy to choose the best mobile learning tools for their group. The study used a mixed methods approach to collect data on which tools students perceived as best for PBLs. The participants were surveyed in a pre-project survey, a mid-project survey and post-project survey about which tool they preferred for university work and social reasons. Results show that students changed their preferred tool to WhatsApp over the course of the semester. A focus group with each course section provided qualitative data as to why students preferred WhatsApp. The students also provided poster presentations and journals as to why WhatsApp helped them successfully complete their service-learning projects. This study will show why WhatsApp is a successful mobile learning tool for student collaboration in Project-Based Learning.
Too many words, so little time: How to effectively teach vocabulary in a literacies course

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ABSTRACT

The Foundational Literacies course at Kanda University is designed for freshman students to take twice a week, replacing the old skills-based Basic Reading and Writing courses. The new approach utilises a Multiliteracies-informed pedagogy, and has as its core objective the acquisition of genre- and textual-awareness across a range of modes and formats. However, in order to satisfy institutional goals related to study abroad and criteria for entry into content-based courses, the curriculum designers also wish students to demonstrate their textual proficiency through improved TOEFL scores. Thus, the acquisition and retention of academic vocabulary (specifically the New Academic Word List) is also considered necessary. Enabling students to acquire over 900 academic words in what is already an intense course is obviously a challenging undertaking. Members of a project group at Kanda University of International Studies therefore have decided to pilot a creative, efficient and effective strategy for doing this that involves games, novel forms of testing, mnemonics and spaced-repetition retrieval exercises. This strategy is being tested with two classes this semester, and initial feedback suggests that the approach is promising. In this session, we will provide background and rationale to the approach and offer examples from the pilot that highlight the ways that these activities are being integrated into the course.

Keyword: Academic, Literacies, Vocabulary.

Main Description for your Research

To determine initial receptive knowledge of the target lexical items, all students take a pre-test before the course begins. The same test is administered at the end of the semester to help analyse the extent to which the methods and treatment used to enable learner acquisition of academic vocabulary have resulted in receptive knowledge gains. Between the pre- and post- tests throughout the academic year, classes will create and complete their own tests in groups.
Tests will be administered once per week and test items will be comprised of a subset of words from the main list that students receive from the teacher each week. Both classes will also be taught acquisition techniques, such as forming keyword mnemonic sentences (Atkinson, 1975), in class. Additionally, one class will also be exposed to spaced-repetition retrieval exercises, where students are asked to recall the meaning of previously studied English words, while one class will not. Based on a large body of research involving spaced-repetition (Leitner, 1972; Mondria and Mondria-De Vries, 1993; Goossens, Camp, Verkoeijen, Tabbers, and Zwaan 2012), it is likely that the experimental group will perform better on the post-test than the group who is only exposed to mnemonic acquisition strategies. The levels of improvement in the two groups, coupled with results from surveys administered to students at the end of the year, will be compared and used as the basis for considering the effectiveness of these exercises so that changes can be made to the Foundational Literacies course for the next academic year.

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The Impact of The New Policy of National Exam towards Mathematics Learning Process in Indonesia

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ABSTRACT
Since the beginning of 2015, national exam in Indonesia was no longer used as graduation standard. This policy was made because of negative effects of this standardized test toward educational system in Indonesia. One of the effects is the teaching method used by teacher that rely on memorization and drill practice. The aim of this study is to see whether this new policy has an impact in teaching learning process in mathematics classroom. The samples of this study were 17 mathematics teachers from six different provinces in Indonesia. Before this policy issued, 12 teachers use conventional learning, while five teachers use unconventional learning methods such as problem solving, open ended problems, and contextual learning. The results of questionnaire reveal that from 12 teachers who use conventional method, only two teachers that change their teaching method after the new policy about national exam released. It means that 83% of teachers who use conventional learning in this study keep using the same method. Easy in the implementation and easy to understand by students are the main reasons of teachers decision to keep implementing this method. This finding shows that the changing of intended curriculum by government as decision maker is not followed by the changing of implemented curriculum-pedagogy- by teachers. Based on the result of this study, the recommendations are given to incorporate the vision and mission of government and teachers in order to reach the desired goal as well as for doing further research on this issue.

Keyword: national exam, policy change, teaching method, mathematics, Indonesia
Errors in Translation of the Discourse Markers from English into Persian in movie subtitles

Discourse markers are a part of language much neglected in the Persian language although they play a very important role in our daily conversations. This study aimed at researching and investigating errors occurred in the translation of discourse markers (DMs) from English into Persian in the subtitles of drama movies. To conduct this study, five movies were chosen. Each individual movie was selected from a single decade from 1970 onward. After the selection of the movies, six commonly used DMs which were mentioned in Chaume's (2004) work were searched and obtained by the aid of computer softwares (AntConc© And adobe acrobat reader™). These DMs were categorized based on their functions in the original work. The obtained DMs in this study were analyzed carefully by the researcher and errors in translation were identified. The errors were categorized according to Chaume’s (2004) model including omission, literal translation and translation by a different DM. The results and chi-square showed that omission is the most prevailing error made by Iranian translators in translation of English subtitles into Persian followed by literal translation and translation to another DM. Using some expressions like midooni (I know), manzooram ineke (I mean) and etc. in today’s Persian language indicates that English DMs are being directly copied into Persian which may cause interference.

Keywords: Discourse markers, Subtitles, translation, errors, translation strategy
PERCEPTION OF MATHEMATICS PEDAGOGY COACHES TO THINKING MAPS
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ABSTRACT

The introduction of Thinking Maps® through i-THINK program in Malaysia Education since 2012 has received many different views among teachers around Malaysia. Thus, the purpose of this study was to find out the perceptions of Mathematics Pedagogy Teacher Coaches to Thinking Maps® after attending Thinking Maps® workshop organized by Ministry of Education Malaysia. The survey approach was used and data were collected using questionnaires which are constructed based on David Hyerle of Thinking Maps®. There were 147 Mathematics Pedagogy Coaches around Peninsular Malaysia taking part in the survey. The data were analysed using descriptive statistics. The findings indicated that Mathematics Pedagogy Coaches were positive about Thinking Maps® and found that it was useful and easy to use. This study makes coaches believe that Thinking Maps® is a useful thinking tool and can be effectively used in Mathematics learning. These beliefs encourage coaches to conduct training and workshops to teachers at state and district levels respectively.

Keyword: Thinking Map®, Mathematics, Pedagogy, Thinking Tools, Thinking Process
Verb Finiteness in the English Sentence
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ABSTRACT

Any independent clause must contain one and only one finite verb. A finite verb is the one which can occur on its own in an independent clause and permit formal contrasts of tense, number, and mood. On the contrary, a non-finite verb or construction, can occur on its own only in a dependent clause and lacks the said contrasts. This dichotomy plays a significant role in the recognition of the sentence from non-sentence. It is particularly of help in teaching and learning English as a foreign language, in a number of aspects. The objective of this article is to formulate the rules governing the two categories of verbs and to illustrate how the concept of finiteness can be utilized to help prevent the formation of ungrammatical sentences in English. Some simple rules facilitate the interrogation and/or negation of English sentences are also introduced.

Key Words: Finite, Non-finite, Finiteness, Elsewhere Rule.

1. Introduction

The Finiteness of the sentence is a universal linguistic concept. No sentence can be grammatical without one and only one finite verb. A finite verb is the one which permits formal contrasts of tense, number, and mood. In contrast, a non-finite verb or construction lacks the said contrasts and therefore, can occur on its own only in a dependent clause. Differentiating between these two verb forms has a significant part in the recognition of the sentence from non-sentence. This dichotomy is of help to both EFL and ESL learners and teachers, in a number of aspects. This article aims at a brief formulation of the rules governing the two categories of verbs and manifesting how the concept of finiteness can be utilized to help prevent the formation of ungrammatical sentences in English. It also introduces some simple rules facilitating the interrogation and/or negation of English sentences.

2. Literature Review

2.1. Finite and non-finite verb forms

A finite verb is "a verb form or verb phrase that serves as a predicate; it has number and person. Opposed to the finite verb is the nonfinite verb form, which cannot serve as a predicate. Nonfinite forms are participles, gerunds, and infinitives:
He \textit{walked} to school.
I \textit{have} finished the job" (Shaw, 1986:56).

"Sentences with tense and AGR are called finite clauses. Thus: \textit{Mervyn plays the piano very well.} is a finite clause because it contains the ending –s to show both present tense and singular AGR" (Cook and Newson,1997:52).

A finite verb " is always marked for tense, and it also carries agreement, insofar as English has any agreement.”, while “A non-finite form is not marked for tense, it shows no agreement and it cannot be the only verb in a sentence”( Trask 2008:90). This means that" participle forms- the present participle, or 'ing' form, and past participle, or 'en' form- are always non-finite" (Finch, 2000: 92).

For Leech, Deuchar and Hoogenraad (1983), finite verb forms are those " showing TENSE (past or present) and SUBJECT CONCORD (for person and number, and is either the operator (the first auxiliary verb in the VP) or the main verb if there is no operator"p:78).

Finite verbs are verbal forms "marked to show that it is related to a subject in PERSON/and/or NUMBER, and show TENSE. A non-finite form is not marked according to differences in the person or number of the subject, and has no tense" (Richards and Schmidt, 2002: 202). On this basis, "the –s form and the past form are called FINITE, whereas the –ing participle and the –ed participle are called NONFINITE" (Quirk et all, 1995: 96).

According to (Crystal, 2001:146) "all forms except the INFINITIVES and PARTICIPLES (-ing and –en forms) are finite ". Thus " I \textit{walk} is a finite use of verb because it expresses only one tense, number and mood (1st person present indicative), as can be shown by such contrasts as I walked and He \textit{walks}. The verb in Walking in the street…, is however nonfinite, as it is not limited in this way" (Crystal, 1992:76).

"A finite (auxiliary or non-auxiliary) verb form is one which carries (present/past) tense- e.g. can, could, hates, went etc. "(Radeford, 2006:480).

2.2. Auxiliary vs. Lexical Verbs.
Related to finite vs. non-finite dichotomy is the dichotomy of Auxiliary vs. Lexical (also, referred to as full or main) verb. An auxiliary “serves to express any of several grammatical categories. The English auxiliaries are specialized verbs; they chiefly serve to express aspect, voice and modality, and they commonly also carry markers of tense and agreement.”(Trask, 2008:29)

"In English, \textit{be, do} and \textit{have} and the modal verbs like \textit{may, can} and \textit{will} are all auxiliaries. For example:

She \textit{is} working.
He \textit{didn't} come.
They \textit{have} finished.
They may go.
Can you manage?
They will arrive tomorrow.

Lexical verbs can be used as the only verb in a sentence, e.g. She works at the factory. Be, do, and have can also be used as lexical verbs, e.g. He is happy, She does computer studies at the university, and They have three children." ((Richards and Schmidt, 2002:44).

3. Data of the Study
Simple sentences collected from elementary language text-books comprise the data of the study. They are deliberately chosen for among simple sentences for the ease of discussions and argumentations.

4-Discussions
From the literature review above, rules (a-h) can be inferred:

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Any simple sentence has necessarily a finite verb form.</td>
</tr>
<tr>
<td>b</td>
<td>No simple sentence can have more than one finite verb form.</td>
</tr>
<tr>
<td>c</td>
<td>Finite verbs (may) undergo changes, non-finite verbs may not.</td>
</tr>
<tr>
<td>d</td>
<td>Sometimes a finite and a non-finite verb seem to have the same form. This resemblance is superficial and accidental.1</td>
</tr>
<tr>
<td>e</td>
<td>In English, non-finite verbs are either participles (present or past), or infinitives (with or without to).</td>
</tr>
<tr>
<td>f</td>
<td>If a simple sentence has more than one verb, the finite verb form is the leftmost verb of the VP.</td>
</tr>
<tr>
<td>g</td>
<td>The finite verb of sentences with more than one verb is necessarily an auxiliary (operator), and it is a form of BE, HAVE, or a MODAL.</td>
</tr>
<tr>
<td>h</td>
<td>The only verb of a sentence is a lexical (i.e. non-auxiliary) verb form.</td>
</tr>
</tbody>
</table>

Table (1)

Sentences (1-21), in Table 2, are examples of the use of finite and non-finite verb forms in English:

---
1-It is worth insisting that English, with its small number of grammatical markings, is not the ideal language to illustrate the difference, because some of the non-finite forms look just like some of the finite forms. For example, the verb form opened is finite in He opened the door and non-finite in He has opened the door. The reason behind this superficial resemblance is that English uses the same marker (-ed) for both the past form (a finite) and the Past Participle (a non-finite) verb form, in regular verbs. The same resemblance can be seen in the form drive which is a finite verb in I drive home every day, and non-finite in I can drive.
### Table (2)

<table>
<thead>
<tr>
<th>Finite Verb</th>
<th>Subject</th>
<th>Finite Verb</th>
<th>Non-finite Verb 1</th>
<th>Non-finite Verb 2</th>
<th>Non-finite Verb 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I</td>
<td>study</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>He</td>
<td>studies</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Does²</td>
<td>he</td>
<td>--</td>
<td>study?</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>They</td>
<td>studied</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>they</td>
<td>--</td>
<td>study?</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>6</td>
<td>I</td>
<td>am</td>
<td>studying</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>7</td>
<td>He</td>
<td>is</td>
<td>studying</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8</td>
<td>Is</td>
<td>he</td>
<td>--</td>
<td>studying?</td>
<td>--</td>
</tr>
<tr>
<td>9</td>
<td>I</td>
<td>was</td>
<td>studying</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>10</td>
<td>I</td>
<td>have</td>
<td>studied</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>11</td>
<td>He</td>
<td>has</td>
<td>studied</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>12</td>
<td>He</td>
<td>had</td>
<td>studied</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>13</td>
<td>I</td>
<td>can</td>
<td>drive</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>14</td>
<td>He</td>
<td>wants</td>
<td>to leave</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>15</td>
<td>He</td>
<td>was</td>
<td>killed</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>16</td>
<td>He</td>
<td>is</td>
<td>going</td>
<td>to study</td>
<td>--</td>
</tr>
<tr>
<td>17</td>
<td>He</td>
<td>has</td>
<td>been</td>
<td>studying</td>
<td>--</td>
</tr>
<tr>
<td>18</td>
<td>He</td>
<td>has</td>
<td>been</td>
<td>taught</td>
<td>--</td>
</tr>
<tr>
<td>19</td>
<td>He</td>
<td>is</td>
<td>supposed</td>
<td>to be</td>
<td>studying</td>
</tr>
<tr>
<td>20</td>
<td>He</td>
<td>will</td>
<td>be</td>
<td>obliged</td>
<td>to study</td>
</tr>
<tr>
<td>21</td>
<td>He</td>
<td>will</td>
<td>have</td>
<td>been</td>
<td>studying</td>
</tr>
</tbody>
</table>

### 5. Applications

#### 5.1 Judgment about the sentence ungrammaticality

Some ungrammatical sentences made by EFL learners can be traced back to the violation of one of the above-mentioned rules. Some typical ungrammatical sentence frequently made by EFL learners are as follows³:

22- * I able to speak English.
23- *The keys found.
24- * He be working.
25- * He is work.
26- * The letter was wrote.
27- * I like speak English.

---

² - Auxiliary verbs are underlined
³ - These sentences are collected from among ungrammatical sentences by students taking General English at Yasouj University, Iran.
28- * Did he understood the lesson?
29- * He has went to school.

Sentences (22-24) violate Rule (a), (25) violates (b) and (e), and (26-29) violate (c), etc.

5.2 Application of the Dichotomy in Negation and Interrogation

Finite and non-finite verb dichotomy, can have an important part in the negation and/or interrogation of English sentences. By explicit teaching of an Elsewhere Rule[^4] and its (rule-governed) exception, negation and interrogation of English sentences of all tenses can be instructed much more easily.

5.2.1. Elsewhere rule

Default:

Unless the affirmative sentence has merely a finite verb form other than a finite form of the copular verb BE, i.e. *am, is are, was and were*, apply Maxims A, B and C, respectively, to convert the sentence to yes-no question, wh-question & negative:

<table>
<thead>
<tr>
<th>Maxim A</th>
<th>Just tropicalize the finite (auxiliary) verb. The sentence will be converted to a yes-no question.</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-</td>
<td>He is working.</td>
</tr>
<tr>
<td></td>
<td>Is he working?</td>
</tr>
<tr>
<td>31-</td>
<td>You have worked.</td>
</tr>
<tr>
<td></td>
<td>Have you worked?</td>
</tr>
<tr>
<td>32-</td>
<td>He is going to work.</td>
</tr>
<tr>
<td></td>
<td>Is he going to work?</td>
</tr>
<tr>
<td>33-</td>
<td>He has been working.</td>
</tr>
<tr>
<td></td>
<td>Has he been working?</td>
</tr>
<tr>
<td>34-</td>
<td>He is a student.</td>
</tr>
<tr>
<td></td>
<td>Is he a student?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maxim B</th>
<th>Put the wh-word before the finite (auxiliary) verb. The sentence will be converted to a wh-question.</th>
</tr>
</thead>
</table>

[^4]: An elsewhere rule is "a rule in a generative grammar that applies whenever the conditions for more specific rules are not met: hence a default rule" (Matthews, 2007:119)
35- **Where** is he working?
36- **Where** have you worked?
37- **How** is he going to work?
38- **When** has he been working?

<table>
<thead>
<tr>
<th>Maxim C</th>
<th>Just insert NOT after the finite (auxiliary) verb. The sentence will be converted to a negative question.</th>
</tr>
</thead>
</table>

39- You are playing soccer.
   You are **not** playing soccer.

40- He has played soccer.
   He has **not** played soccer.

41- You can play soccer.
   You **cannot** play soccer.

42- He is going to play soccer.
   He is **not** going to play soccer.

43- He has been working.
   He has **not** been working.

### 5.2.2. Exception

If the sentence has no auxiliary verb form, to make the sentence negative or interrogative, apply Maxim D:

<table>
<thead>
<tr>
<th>Maxim D</th>
<th>Insert the auxiliary verbs do and does (for the present) and did (for the past) between the subject and the already existing finite verb forms.</th>
</tr>
</thead>
</table>

44- He plays.
45- * He **does** plays.

46- You work.
47- *You **do** work.

48- He went.

---

5- The verb form work in (46) is the only verb of the sentence and therefore a finite verb form. In (47) do is inserted before the finite verb of the sentence (46). Although (47) is not ungrammatical at face value, in the explanation of the rule, the concept of “finiteness” should not be confused.
49- * He did went.

These auxiliary verbs are substitutes for the finite verbs of the new sentences. They move the already existed finite verbs to the right. As two finite verbs can not occur in one simple sentence, they should be converted to non-finite verbs, i.e. verb words:

50- He does play.
51- We do work.
52- He did go.

Sentences (45-47) are grammatical and ready for negation and/or interrogation. Now, they are ready for the application of the Elsewhere Rule:

53- He does play.
   Does he play?

54- You do not work.
   Do you work?

55- You did not go
   Did you go?

To make negative-interrogative sentences, apply the above-mentioned negation and interrogation Maxims A, B and C, simultaneously:

56- Are you not playing?
57- Do you not work?
58- Is he not a student?

Note 1: The contracted form n’t, always attaches to the finite verb forms inseparably:

59- You don't work.
60- You aren't playing.
61- Don't you work?
62- Isn't he a student?

Note 2- Sentences with a "to infinitive" can have two negative forms, of course with slightly different meanings:

(a) –By applying Maxims A-D:

63- I am not going to work.
64- I do not have to work.
6. Conclusions
Differentiating between finite and non-finite verb forms is far from trivial. Focusing on the dichotomy, and instructing it explicitly, would play an important part in teaching and learning English as a foreign language, giving EFL learners a good insight about the nature of the sentence and a sound judgment about the grammaticality of sentences. Lack of an explicit instruction of the dichotomy could be the source of a number of ill-formed sentences made by EFL learners. Moreover this dichotomy could be of a great help in facilitating the teaching and learning of negation and/or interrogation of English sentences.

6- The Department of English of Yasouj University, Iran, where the writer of this article is affiliated with, gives an English placement test to newly admitted undergraduate students, in the beginning of each academic year. The writer, having coordinated with the department, has conducted the following experimental study, 4 times, so-far. As many as 60 students having obtained the lowest scores on the grammar part of the placement test were selected and divided (each time) into two 30-student sections of Elementary English course. One section (the control group) was provided only with a placebo, i.e. the implicit method of teaching the tenses and the way of negation and/or interrogation of sentences, tense by tense. The other section (the experimental group) received treatment, i.e. teaching the concepts of finite, non-finite, negation and interrogation, explicitly, with the focus on the above-mentioned concise three-rule method. The period of the instruction for both groups was equal, amounting to 20 hours within 4 weeks. In the end, the two groups were given an identical mid-term exam. As was predicted, the scores obtained by the experimental group proved significantly higher than those of the control group, in all instances of the experiment.
8-References


Introducing School Garden into Omani Schools: What we learned from the piloting experiment

Prof. Abdullah Ambusaidi*, Dr. Rashid Al-Yahyai* & Prof. Neil Taylor**
*Sultan Qaboos University, Oman, **University of New England, Australia

The Sultanate of Oman is located in south east of Arabian Peninsulas with total area of 300,000 square km and population of almost 4 million. Since 1970, Sultanate of Oman is moving very rapidly towards modernity. Consequently, the Sultanate of Oman is beginning to face a potentially serious increase in what are now termed ‘lifestyle’ diseases. These include diabetes, heart disease, hypertension and various forms of cancer. The lifestyle factors that largely contribute to these diseases are poor diet and limited exercise. Furthermore, previously, many Omanis worked in agriculture, but today less people especially youth are working in this sector. These factors provided the rationale for the research project presented in this paper. The project has several aims. These include improving educational outcomes across the curriculum in the short term but also dietary outcomes in the longer term. A further aim is to change students’ attitudes towards agriculture as very important sector in Omani society. The project was implemented as a pilot in six schools chosen from three districts in Oman. It was started in November 2014 and will end in 2016. This paper presents some preliminary findings from a project that is being undertaken for the first time in Omani schools. The project is funded by the Oman Research Council (TRC) for the amount of US$250,000.
Integrating Character Education and Local Culture for Meaningful and Contextual EFL Instruction

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ABSTRACT
The degradation of moral values among students and the assumption that English entails westernization which will fade local culture, national identity, and religious commitment have worried several eastern countries such as Indonesia and other Asian countries. This issue results in the urgency of character education to be included in school curriculum. However, overcrowded curriculum hinders the addition of character education as a separated subject matter otherwise it will trap students to have more burden. Accordingly, integrating character education and local culture in EFL instruction which includes curriculum and material development as well as teaching and learning activities supposed to be illuminative idea to solve this problem. This idea is rooted from the fact that moral values and culture are often embedded in EFL teaching materials but mostly in western context. It will be much better and contextual if the teaching materials are developed based on local culture without forgetting culture values internationally. For instance, in teaching past tense and narrative text EFL teachers in Indonesia develop the teaching materials by accentuating the use of Indonesia’s local stories or folklores such as “Bawang Merah dan Bawang Putih”, “Timun Mas”, “Malin Kundang”, and so on more than western stories such as “Romeo and Juliet”, “Snow White”, and so forth. This conception is therefore expected to help students in developing their linguistic and cognitive skills in acquiring English, social awareness, emotional well-being, critical thinking, a tolerant world view, and indeed promote local culture to international stage.

Keywords: Character Education, Local Culture, EFL Instruction

1. Introduction
Moral degradation among adolescents and problems related to juvenile delinquency in Indonesia has worried Indonesia’s government. Based on statistical data gained from a survey conducted by Parker and Nilan (2013) on biggest problems for Indonesian youth today showed that those problems seem rooted from education and thus calls character or moral education to be integrated into education curriculum. Those problems are classified into several categories. Free sex, too much socializing, and romance problems occupy the highest percentage which is 50.2%. Following those, the problems of using drugs, alcohol, smoking, HIV/Aids, and reproductive health contribute 12.3%. Besides, 9.6% of Indonesia’s youth problems caused by the lack of respect and confidence among youngsters, too emotional, pre-occupied with appearance, and depression.
Meanwhile the rest of 27.9% out of the whole problems are caused by negative influences in immediate environment, lack of religion, morals, principles, western influences, negative relationships with parents or family and others. Muzakki (2012) added that cheating on exams is very common issue among Indonesia’s students in which the chief of Indonesia’s Deputy Corruption Eradication Commission (KPK), Widjojanto (2012) in Muzakki (2012) claimed that it is one of the roots of corruption practice. This problem indicates that Indonesia’s education still cater to individual virtues only rather than civic virtues (Muzakki, 2012). In order to tackle these problems, whole society, not only parents but also education stakeholders including teachers should participate in youngsters’ moral improvement.

Accordingly, Indonesia’s Ministry of Education and Culture then issued and implemented new curriculum of 2013 which uses socio-eco-cultural approach which integrates moral education to the subject matters to shape the individuals who are faithful in God, good in characters, confident, successful in learning, responsible citizens and positive contributors to the civilization (Ministry of Education and Culture, 2012). This new curriculum framework is also as one of government’s efforts to reduce moral-related problems among students. In this curriculum framework, character education is integrated into all subject matters not as a separated subject matter. It is since to avoid more overcrowded curriculum with many subject matters for students to learn. However, the implementation of this character education integration curriculum invites pros and cons among practitioners. Those who contradict this curriculum implementation argue that character education integration is ineffective and it will distract the academic purpose of teaching and learning because they consider that the affective domain is more dominant than the cognitive domain (Hapsari, 2013).

Therefore, in December 2014 the Ministry of Education and Culture of Indonesia stopped the implementation of this curriculum for its perfection before its reimplementation which is planned in 2019. One of several reasons which is officially written is that because the integration of character education which includes spiritual and behavioral competences into curriculum framework is not too compatible so it distracts the scientific substance or academic purposes of teaching and learning and leads to teachers’ perplexity due to too much administrative burden. (Ministry of Education and Culture, 2014).

As an education practitioner who acted as an EFL teacher, I am motivated to contribute in coping with this problem. I should therefore seek for a way of how to make an EFL instruction which includes EFL curriculum and material development and EFL teaching and learning become more contextual and meaningful. It means that EFL instruction aims not only to help students acquiring language but also to assist them to build good characters which are relevant to Indonesia’s context. Moreover, as an international language, English is sometimes viewed to have a close relationship with western culture and westernization. It is like what Haq and Smadi (1996) claimed that there is a sense of fear among citizens of eastern and religious countries like Saudi Arabia that English entails westernization, detachment to the country, and fades their religious commitment. This such fear also happens among Indonesia’s citizen who are not open-minded particularly those who are too religious and live in rural areas with traditional lifestyle. They are not eager to learn English since they assume that English is identical with western culture, brings negative change to young people’s attitude, and a threat to their religious and traditional culture commitment. Hence, it seems that EFL practitioners have a duty to change those bad assumptions about English to be more open-minded.
view that English is an international language which is significant to learn and definitely will not fade their local culture, national identity and religious commitment.

2. Character education, Language, and Culture

Character education, which is sometimes called as moral education, might be defined as a process or a way of educating students with virtues or values which have been accepted by certain society in order to build good characters in them. Cubuckcu (2012) defined character education as a systematical approach in terms of self-respect, responsibility, honesty and so on to be a good citizen. Lickona, T., Schaps, E., & Lewis, C. (2007) added that character education is about developing important ethical values along with supportive performance values to be a good human being. Besides, using a term “moral education”, Shabaan (2005) defined it as strategic teaching of basic values and principles – such as fairness, honesty, and respect for others – that would develop in learners a sense of social and personal responsibility. Meanwhile, in Indonesia’s context, values or virtues in character education could be added by the five pillars of Republic of Indonesia’s philosophy, Pancasila, which are religious, humanity, unity, local wisdom, and social justice. Using this five pillars of Pancasila, will be more contextual for Indonesia’s students and to achieve the goals of character education in Indonesia’s new education curriculum in order to shape Indonesia’s citizen who are religious, tolerant and civic-minded.

There are several principles of character education proposed by Lickona, T., Schaps, E., & Lewis, C. (2007) in Character Education Partnership in order to be considered as an effective character education, in which the three core principles among those are as following. Firstly, character education should promote both core ethical values and supportive performance values as the foundation of good character in which the school has a role to ensure that these basic human values transcend religious and cultural differences. Secondly, effective character education should not define “character” partially, but comprehensively to develop the cognitive, emotional, and behavioral aspects of moral life. Lastly, character education best uses a comprehensive, unintentional, and proactive approach to develop good characters which include character education as a “hidden curriculum” such as putting it in students and teachers’ relationship and instructional process, “academic curriculum” that integrate character education into core subjects, and “extracurricular programs. Based on those three principles of effective character education, integrating it into EFL curriculum as one of core subjects in Indonesia seems relevant.

In order to find any correlation between character education and EFL instruction, culture and local wisdom play a significant role to be deemed as a tool to underpin character education conveyance. Moreover, in Indonesia, a country which prioritizes religion as one of national philosophy but legalizes several different religions, culture and local wisdom would be helpful to increase tolerant view if there are different paradigms about virtues or moral values in each religion. It is since the values of local wisdom, as what Wagiran (2012) in Alfitr and Hambali (2013) stated, are always inherent with the values of character education. Local wisdom is correlated to a community’s ability to understand the condition of their surroundings or environment which is adapted to current situation and contributes to the way of living, knowledge, and life strategies in the form of actions committed by local community to deal with various social problems (Alfitr and Hambali, 2013). In addition to this view,
Indonesia’s philosophy which is elaborated in the five pillars of Pancasila, includes local wisdom as the fourth pillar. Therefore, the more students understand about the various virtues embedded in local wisdom, the more they will grow good characters in themselves.

3. **EFL based on Indonesia’s new curriculum framework and the challenges**

Based on the newest Indonesia’s curriculum, which is curriculum 2013, the framework of EFL instruction put affective domain more dominant than cognitive and psychomotor domains. Affective domain is considered to be core competence, while cognitive and psychomotor domains are elaborated as basic competence. However, the virtues of religion become the major point. For instance, in the EFL curriculum for ten graders of Secondary Schools, the core competence consists of four points with comprehending and applying religion virtues in everyday life as the first point (Ministry of Education and Culture, 2013). Following it, developing character education which includes honesty, discipline, responsibility, care, politeness, teamwork, and so forth as the second point. Then, the next point is about comprehending and applying factual, conceptual, and procedural knowledge based on technology, art, culture, and human civilization. And lastly is about processing, thinking, and applying knowledge independently. Meanwhile, the cognitive and psychomotor domains which contain the objective of teaching and learning English as a foreign language are elaborated from the core competence as basic competences. For example, the first basic competence which is elaborated from the core competence is about developing and demonstrating honesty, caring, friendliness and responsibility in interpersonal communication by giving and responding for persuasion, encouragement and delivering criticism. The second basic competence is about developing and demonstrating cooperative, responsive and proactive attitude and internal motivation by doing transactional communication with the teacher, friends and responding long text and advertisement. Thirdly is about developing and demonstrating discipline, responsibility, helpfulness, keeping peace and environmental friendliness by listening and speaking. Based on the elaboration of these core competence and basic competence, it shows that the integration of character education is clearly accentuated but seems too dominant that conceals the academic aspects of learning English. The character education aspects are really tangible, but the language aspects seem biased.

This framework indeed becomes a challenge for teachers in developing lesson plans and delivering the materials because it seems reverse that the EFL aspects are included in the character education not vice versa. In order to assist students to achieve the main goal of learning English and acquire character education as well, teachers should therefore learn more how to make sense this integration and create teaching and learning environment become more meaningful but still effective to help students acquire the language as the main goal. It is in line with what Muth’im (2014) claimed that the change of curriculum may be perceived as both complicated thing and challenge. Complicated thing in this case means that the curriculum change may results in frustration for most teachers, but it is may also perceived as something new that challenges teachers to explore their knowledge, skill, and creativity to make the teaching and learning more enjoyable and more productive. Likewise, this curriculum change also triggers positive and negative responses from English teachers toward the general concepts of curriculum which seems imbalance between affective domain and
4. Integration of character education and culture in EFL instruction

As in the previous explanation that one of criteria of effective character education is integrating it into the core subjects, there is no fault in the Indonesia’s 2013 curriculum including EFL curriculum. Instead, incorporating moral education into EFL classrooms will help students to develop their linguistic and cognitive skills, social awareness, emotional well-being, critical thinking, and a tolerant world view (Shaaban, 2005). However, there is still some aspects that need more attention and improvement. One of those aspects is the way or framework of how teachers convey character education in the EFL instruction beginning from creating lesson plans, preparing and developing teaching materials and administering teaching and learning activities in classrooms. In order to achieve the main goal that assists students to acquire English, teachers could consider to redefine the ideas about character education which is dominated by religious values to be based on the virtues of Indonesia’s philosophy which reflects various cultural values and includes local wisdom in it. It is in line with the idea proposed by Hapsari (2013) about strategies to make sense character education in EFL curriculum framework which are defining religious values and attitude stated in the core competence into “culture as a local wisdom” and suggesting the teachers to comprehend “culture as the product of interaction”.

5. Developing EFL teaching materials based on character education and culture integration

The proposed framework of character education integration for EFL instruction in Indonesia in this paper is accentuating the values of local culture which is reflected in the five pillars of Indonesia’s philosophy, Pancasila. Although the first pillar is about religious values, the following pillars are humanity, unity, local wisdom, and social justice which holistically represent good Indonesia’s citizen. In developing EFL instruction, teachers could correlate the values of character education in the syllabus provided by government with the values or virtues of Indonesia’s cultural view. This proposed framework is expected to be relevant with Indonesia’s context as it is generally acknowledged that Indonesia is divided into several islands and different tribes. Each island and tribe indeed have different cultures, customs, and values which can be the sources of learning language through intercultural teaching and learning.

Hence, although it is important to introduce costumes and cultural values of western community, teachers should not merely use western stories as learning materials but emphasize the use of Indonesia’s local stories or folklores. It is since Indonesia’s EFL teachers commonly develop lesson plan using texts or stories which come from western culture as learning materials although it contradicts the values of Indonesia’s local culture. For instance, when developing teaching materials from basic competence about narrative text which includes language use about past tense, teachers commonly use western stories such as Romeo and Juliet or other past stories happened in western countries which explores little bit free love relationship. The values embedded in those stories such as prioritizing human right in expressing love before marriage freely by hugging, kissing and so on or even opposing their parents’ advices are indeed not
relevant with Indonesia’s cultural values which prioritize politeness, respect to parents, and controlled relationship. Consequently, many Indonesia’s youngsters prefer to mirror western lifestyle rather than eastern lifestyle and it triggers the emergence of juvenile delinquencies among them. Even, it is possible that Indonesia’s young people are more familiar with western culture than Indonesia’s local culture. Therefore, teachers are suggested to use local stories which come from different islands or regions in Indonesia. By doing so, students will be familiar with the local culture which contains appropriate virtues and local wisdom to be applied in their social life.

6. Character education and culture in EFL classrooms

In teaching and learning process in the classroom, learners could benefit from the integration of character education and culture. Students will not only acquire the language but also gain virtues of character education which are embedded in the materials and are delivered through cultural and civic approach. For instance, in the classroom teachers deliver the materials which have been prepared and developed by using local stories or local issues and make a reflection about the virtues which are inherent in the stories at the end of the teaching and learning activities. In case teachers are teaching reading narrative text using different local stories such as Malin Kundang, Bawang Merah dan Bawang Putih, Si Kancil, Roro Anteng dan Joko Seger, and so forth, they could make an interactive discussion or ask the students to analyze the moral values in the texts. However, the case of narrative text here is only a sample, the implementation of integrated character education and culture as local wisdom here is not narrow at certain topic or sort of text, but could be implemented in all topics. This proposed idea is expected to be relevant as Hamdany (2012) stated that language learning is inseparable from cultural values, so that using cultural approach will assist students to easier acquiring the language.

7. Conclusion

Integrating character education in Indonesia’s curriculum particularly in EFL curriculum is definitely important due to its urgency to cope with moral degradation faced by Indonesia’s youngsters. However, the imbalance framework which accentuates affective domain as character education more than the language aspects which are considered as cognitive domain invited contradictory views from practitioners which suggest the postponement of the curriculum’s implementation. Therefore, the discussion in this essay seeks for a solution in order to effectively implement the hidden character education curriculum in EFL as a core subject. Character education integrated with culture as local wisdom is proposed to be relevant in Indonesia’s context. EFL teachers could use various local stories or folklores in developing the materials more than the use of western stories which are not applicable in Indonesia’s context. Through these local stories, students will learn lots of cultural and civic virtues as moral values of the stories. Besides, using these local stories will create contextual EFL classroom which will erase the assumption that learning English results in westernization that will fade local culture, civic values, and religious commitment.
REFERENCES


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Educational Leadership: Accountability & Sustainability

ABSTRACT
Introduction: The debate over whether great leaders are made or born is something that has been discussed, reviewed and researched with no tangible conclusion. In today’s ever-changing and globalized environment, educational leaders have to formulate and implement plans and objectives to keep ahead of competition. What can an educational leader do to change the dynamics of the workplace? What are the accountability factors that have to be taken into consideration when planning goals and objectives? What can an educational leader do to sustain and make the positive changes grow and evolve?
Aim: This presentation will aim to present the factors that an educational leader is accountable for. These factors are an integral part of goals planning. Achieving and sustaining the results of these goals is a twofold process:
1. Maintaining the success rate &
2. Evolving the process itself
Processes that are routine and expected can have better outcomes if the ‘bigger picture’ is brought into focus. Motivation, team-building and transparent management styles will also be discussed.
The paper will also aim to show that leaders need not necessarily be an obvious and an intimidating presence. They can also function effectively by being present as a subtle and a ‘behind the scenes’ leader with due recognition from peers and the people under him/her. The presenter hopes to showcase her findings in her tenure as an educational leader.
Conclusion: As educational leadership involves managing mostly students, peers and stakeholders, it is quite challenging to maintain a balance that helps bring about changes and introduce new approaches that suit all including institutional objectives.
(KEY WORDS: Leadership, goals, sustainability, accountability, achievement, findings)
1. Introduction:
Are leaders born or made? This question is as confounding as “Which came first: the chicken or the egg?”
Some people have the necessary skills innately within them to become distinguished leaders. Others acquire these skills with practice, experience, mentoring and learning. Experience can be a great teaching tool to hone skills that one is innately born with. So, it is probably safe to deduce that a combination of natural leadership skills and experience can make a great leader!
Educational leadership in simplistic terms is people in leadership roles in an educational environment. It mainly involves improving processes, adapting to changes in a dynamic educational environment and meeting goals and outcomes. As in any other working environment, it is not without its own challenges and pitfalls. Making positive changes and improving existing processes are two constants that need to be continuously worked on irrespective of the actual outcomes. Working within a framework can prove to be restrictive at times and bringing changes and sustaining those changes can be quite challenging.
This paper will aim to discuss and also showcase the author’s role as an educational leader and her findings on what works and what doesn’t.

2. Leadership style:
So many leadership styles have been analyzed and compartmentalized according to certain attitudes and implementation styles of a leader. We have styles that are completely commanding to styles that are completely democratic. A simple search on the web yields three different and broad leadership styles.

- Authoritarian style is characterized by individual control over all decisions and little input is expected from group members. It could be used if a group member lacks knowledge about a certain procedure.
- Participative style not only offers guidance to group members, but leaders also participate in the group and allow input from other group members. It is very useful with group members who understand the objectives and their role in the task.
- Delegative style offers little or no guidance to group members and leave decision-making up to group members. This works if a team member knows more than you do about the task.

However, to box a certain leadership style restricts and does not take into account any deviation that a leader might make whatever his / her style maybe. Though an online survey revealed that the author mostly uses the participative style, it was found that
transparency and subtlety in dealing with team members led to far better outcomes, promoted mentoring and team work. It was also found that leadership styles had to shift according to situations and sometimes were also a combination of the three.

3. Accountability:
As in any leadership role and its accompanying responsibilities, there are various accountability factors that have to be taken into consideration in an educational institution too. These factors can either be internal or external or in this case, a combination of both. Whatever changes or improvements are considered, these factors remain constant and unchanged. In fact, these factors should be the focal point around which all processes are involved and ultimately evolve.

a. Good results: The ultimate goal of an educational institution is to produce a respectable passing rate of its students. Any result that is not satisfactory or below the expected numbers is directly related to the quality of teaching, the quality of the study program and ultimately the quality of the institution itself. But then again, producing exemplary and ideal results of all its students all the time is unrealistic and in this case the ethics of the institution will be questionable. A realistic balance is expected and any deviation is bound to upset the proverbial ‘apple cart’.

b. Student retention: This factor is of increasing importance for obvious reasons to an educational institution as it is directly proportional to its graduation rates and its revenue. If a large section of students either drop out or transfer to another institution and if this is a regular occurrence, administrators are bound to investigate, delve and turn inward to its resource personnel to get to the root of the problem.

c. Teaching quality: This is a non-negotiable and an uncompromising element in any educational institution. The repercussions of poor teaching quality are never pleasant for both the staff and the institution. The reputation of the institution largely rests on the quality of teaching and the general perception of the public can be favorable or otherwise that has a direct impact on student turnover.

d. Student satisfaction: Student satisfaction leads to student retention. This factor encompasses teaching quality, type of resources available, student support systems and opportunities for extra-curricular activities. It is usually a primary
goal for an educational institution and processes involved should not ignore or override this factor to achieve others.

e. Employee retention: This includes staff turnover, recruitment and retention. Attracting the best talent requires a stellar reputation of the institution. Once recruited, it is the expectation of the administrators that its employees are groomed and inducted into their respective departments of the institution. High rates of attrition could possibly mean dissatisfaction with the job and its associated responsibilities.

f. Resources (staff & monetary): Planning and implementation of any process involve the availability of resources. This covers both the number of staff personnel and the monetary aspect that are already predetermined factors. Any variation that is required needs planning, a vision and a sound rationale as this factor has a direct implication on the financial aspects of the institution.

g. Professional development: Sustained and regular opportunities for professional development & research activities keeps educators up-to-date on emerging technologies & tools for the classroom, new curriculum resources, and more. It is a common expectation that professional development is ongoing, experiential, collaborative, and connected to students.

h. Fulfill outcomes: This can be either an external or an internal factor or sometimes both. The curriculum, implementation and output have to meet the standards. Standards set are general and it is up to the individual program of study to devise, implement, revise and implement again to help meet standards completely. This is usually an ongoing process that has to be tweaked regularly to fine tune the outputs to the outcomes.

i. Quality assurance: This is essentially designed to prove and improve the quality of an institution’s methods, educational practices and outcomes. Unless quality practices are at the departmental level, it is next to impossible for an institution to be assessed and audited for quality assurance.

3.1 Challenges faced:
The factors pertaining to accountability are not without its challenges. But as no work environment is challenge free, these challenges were looked upon
closely to identify if there was anything going wrong at the administrative level.

a. Students’ dissatisfaction: This aspect was quite daunting as dissatisfaction in the learning environment could lead to student attrition. This dissatisfaction stemmed from either the students’ inability to cope with the stress of the study and commitment involved or there was a genuine problem with the way learning was imparted. There was very little that could be done with the former as standards couldn’t be diluted to accommodate all. But the latter problem required a serious investigation and had to be addressed as swiftly as possible to avoid further setbacks. Solution:
   - Corrective measures that involved peer observations, mentoring and monitoring progress were undertaken for rectification.

b. Students’ progress: There are a multitude of factors that can impede students’ progress. In the Middle East, one major factor is language proficiency. This ineptitude in language proficiency proved to be a setback for a student as language became more complex and subject oriented. This deficiency could in no way be classified as a student’s inability to learn. Solution:
   - Provided support systems through the student support center to improve language proficiency.
   - Defined better entry requirements at the placement test level by way of stricter placement policy.
   - Defined clear exit standards upon completion of foundation courses to insure preparedness of students.

c. Recruitment of good teaching staff: Teaching staff are usually recruited after careful selection that depends on qualifications and experience in the relevant field. In spite of all the screening processes involved, it was sometimes found that certain staff didn’t meet expectations with regard to teaching quality, skills and overall general performance. Solution:
   - Provided platforms to enhance teaching quality in the form of microteaching segments, peer observations, delegating simple tasks with deadlines, preparation of lesson plans and close monitoring for a period of time (usually a semester).
d. Poor commitment levels: It was found that declining commitment levels amongst staff demoted team work, inability to meet deadlines and carelessness in all tasks carried out.

Solution:
- Tried a one-to-one session to advise and notify and to give an opportunity for change.
- Promoted a sense of accountability through annual appraisals.

e. Challenging study outcomes: This by far was the trickiest to tackle. As there is usually no compromise or dilution of outcomes, and it was expected that both the external and internal outcomes were met, a careful analysis of all forms of assessments and its output had to be measured to arrive at a tangible solution.

Solution:
- Analyzed the output of all assessments and its associated processes against each outcome to understand deficiencies. This is usually a continuous practice performed annually as loop holes had to be plugged constantly.
- Adopted the ‘bottom-up’ approach by keeping the outcomes as the focus to help decide the form of assessment(s) required.

4. Sustainability:
Sustaining best practices and achievements requires a lot of planning and the approach towards it should be realistic. So, why is sustainability important? It is very relevant because if there are no continuous success stories or improvements, then an educational leader does not have a vision. A clear strategy is important to achieve this goal.

a. Simplicity: Though grandiose efforts makes a better impact and will of course be remembered better, it is very difficult to sustain changes and improvements. The reasons can be varied depending on the nature of the change. It can range from monetary reasons to the implementation of the process itself. It was found that the more complex the process, the more difficult it became to sustain it as road blocks kept appearing. Taking small but sure steps was easier than taking giant leaps.
Perceptions and pitfalls: By following a simple approach, it is possible that the efforts undertaken initially will not be viewed or perceived as anything measurable or become noticeable.
Solution: By sustained efforts and its evolvement, changes can be implemented that can change perceptions which of course will be over a period of time. Patience is the key!

b. Being a peer: Blending in with the team led to better insights into the challenges faced. Approachability was never a problem thereby leading to better communication channels. Playing the leader subtly when required without aggression led to better acceptance of critique and suggestions.

Perceptions & pitfalls: Being a peer can be viewed as a leader with a lackadaisical approach. Also, there is always room for a team member(s) to become more aggressive and authoritarian.
Solution: To prevent this, the approach must be balanced and sometimes the leadership style has to become subtly authoritative to insure that decisions taken are in line with expectations and goals.

c. Created a culture of problem solving: By being a peer, it helped instill a spirit of team work. As challenges arose, they were discussed and solutions found as a team. This also allowed flexibility to think ‘out of the box’ and arriving at solutions was a collective responsibility.

d. Encouraged independent thinking: Ideas from team members, however trivial, were implemented if it did not interfere with overall vision and objectives. This extensively helped in enhanced confidence levels and that every voice and opinion matters.

e. Platforms for improvement: As resources were limited to form a formal professional development plan, a simple initiative was devised. Best practices and knowledge sharing seminars was organized regularly where tutors exchanged ideas and information. Opportunities to attend and participate in locally organized conferences were also given to help this initiative. Overtime this practice gained recognition and received its appropriate accolades.

f. Delegation: To promote a sense of responsibility and accountability, all tasks were divided and delegated to all team members. Small committees were
formed within the team to insure that responsibilities were carried out efficiently and effectively. Regular follow ups in the forms of reports, meetings before and after and most importantly suggestions for improvement were collected. This encouraged independent handling of events, seminars and student activities thereby leading to a subtle form of mentoring. This also promoted a sense of importance and responsibility.

g. Flexibility: By being flexible in dealing with team members, it encouraged alternative avenues to be explored in dealing with challenges. Though the outcomes and the expectations remained the same, many other ideas and methods came into focus. One example of this was teaching methodology that was used and which is usually considered a variable as it allows multiple approaches in teaching methodology. But flexibility allowed unconventional methods classrooms that helped bring innovation and creativity into play.

Perceptions & pitfalls: Flexibility can be misinterpreted and liberties taken that lead to tardiness, in meeting deadlines and the quality of teaching itself. Solution: Flexibility cannot be implemented in areas that cannot be compromised. These areas have to be closely monitored and accountability stressed.

h. Quality Assurance: The country’s academic accreditation authority (Oman Academic Accreditation Authority-OAAA) employs the ADRI approach for its quality audit in all its higher educational institutions. Hence, the University in general is committed to this four-step cycle: Approach-Deploy-Review-Improve. This same cycle was used to identify weaknesses and loopholes within the processes and procedures of the department. This was done annually and any improvement required was implemented in the new academic year. Over the years, improvements were made in the areas of assessments, quality of teaching, professional development, students’ attendance and plagiarism. As this is a cyclic and an annual exercise, changes, amendments and improvements are expected constantly.
(i) Approach: The thinking and planning stage:
   - What are the outcomes that need to be achieved?
   - What are the internal and external objectives that need to be considered?
   - What is the devised plan to meet the outcomes and objectives?
   - What may be the potential pitfalls? Is there a plan to overcome these pitfalls?
   - Has the devised approach been made aware to all that will be involved?

(ii) Deployment: The implementation phase:
   - Is the approach being implemented in the best possible manner?
     - What is the monitoring process?
   - What standards or benchmark is being used?
   - Are there enough resources for the deployment?
   - Does everyone involved understand the process?

(iii) Results: The monitoring and evaluation phase:
   - Are the objectives and the outcomes being met?
   - What is the rationale in achieving those particular results after approach and deployment?
   - How will the results acquired and reported be used within the department?
(iv) Improvement- The learning and adapting phase:
   o What are the improvements that can be implemented?
   o Will the improvements solve the potential issue?
   o Have improvements been implemented before that gave tangible and positive results?

5. Conclusion:
Educational leadership like any other leadership role is all about making progress and changes in the right direction. Today, a leader need not be necessarily aggressive but should be definitely assertive. Moving with times and its trappings, an educational leader can bring about revolutionary changes by working within a tight framework. The factors that need to be accounted for can blend in with sustainable changes with a well- devised strategy. Though it may not always be possible to sustain progress or changes that can procure positive results, it is important that issues and situations are controllable and manageable.

References:


All findings presented in this paper are from the author’s own experience as the program coordinator at Arab Open University-Oman Branch.
Development of Verbal Communication between Humanoids and Elderly Humans Module: A Needs Analysis.

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ABSTRACT

As the number of elderly people in Malaysia increases, they might feel lonely as caregivers struggle to give care and provide companionship to the elders. Loneliness can lead to mental diseases like depression and dementia that can have a negative impact on the quality of life of both elderly people and their caregivers. This study intends to find out the criteria of a companion robot that can communicate verbally with Malaysian elders who are lonely. The method used for this study is questionnaire survey with a sample of 80 elderly Malaysians who were randomly chosen. Findings suggest that Malaysian elders prefer robotic pets and robots that can state facts with the size of a small child using a female voice. Most of them prefer to start communication with the robots and they agree that an elderly who lives alone will benefit from having a robot companion. Suggestions for future studies would be that this survey be followed by actual experiments to find out the effectiveness of the study.

Keywords: Elderly, companionship, robots, verbal communication.

1. Introduction

Malaysia’s total population of older persons in the year 2012 was 8.2% from the total population of the country (2.4 million out of 29.34 million). With declining fertility and longer life expectancy, Malaysia’s population is ageing. By 2030, Malaysia will be in the category of ageing nations with older persons constituting more than 15% of the population (Department of Statistics).

With the rise in ageing population, there is a need for physical and cognitive assistance which can be provided through formal or informal care (Cavallaro, et al., 2012). With formal care, the cost and quality of caregivers can be problematic to the elderly as they might not have a steady income at that stage and the number of caregivers in formal homes is limited, hence the quality of caregiving may be poor. With informal caregiving,
there might not be willing individuals to care for the elderly, who are seen as burdens, especially if they are not closely related as some of the elderly do not have children of their own.

To prevent the elderly from relying too much on caregiving, extensive research has been done to improve or at least prevent the decline of health and quality of life of the elders. According to Hirsch, et al., the two main factors that affect quality of life are independence and engagement. Independence is based on a person’s ability to exercise control over his/her life which can be translated to the capacity to care for themselves and make their own decisions. Engagement in this context is defined as connectedness to the world and to other people which can be seen as the ability to share experiences and friendship, to communicate and to share resources. The balance between these two factors determines a person’s quality of life.

In recent years, plenty of research has been dedicated to find solutions to the problems that affect the elderly, mostly pertaining to their physical health. What about prevention? Instead of curing the problem, why not prevent the problem or at least prolong the onset of the problem? With better medical assistance, there are physically healthy elders who live alone, whether by choice or not. These elders are lonely and are prone to cognitive problems such as dementia, depression and other psychological problems (Smith, J. M., 2012). They have independence but are not engaged with others which can lead to poor quality of life. They might not be married, have deceased spouses or do not have children to care for them. Their friends may be deceased or they might think that it is just too much of a hassle to meet.

Animals can be good companions to the lonely elders but there are a few drawbacks in having pets. Pets require a lot of energy in caring for them with costs that might not be in the budget of the elderly. When they get sick, the cost of medication and veterinarian fees can take a toll on them. Fur of pets can cause health problems to the elderly, they can trip on the pets if the animals are sleeping or running around the place. Other than that, the animals do not understand our language and cannot talk back. There is usually a one-way communication in the relationship.

Currently, there is a lot of research on robotics that aid humans in doing or achieving something. A part of that research is being done on socially assistive robots. These robots were made to “develop close and effective interaction with a human user for the purpose of giving assistance and achieving measurable progress in convalescence, rehabilitation, learning, etc.” (Feil-Seifer et al., 2005). The robots were made in the form of animals like Paro (Shibata et al., 2010) and Necoro (Libin et al., 2004), and also in the form of robots that have human features like Brian 2.1 (McColl et al., 2013) and Maggie (Salichs et al., 2006).
Most of the robots that were made for the elderly focus on physical assistance without much emphasis on communication. For lonely elders who are still physically fit, communication is important to prevent cognitive decline which in turn can lead to physical diseases. These elders just want a companion (Zsiga et al., 2013) and it would be better if the companion is able to talk back to them.

Plenty of research has been done on robot acceptance like Stafford et al. (2014), Mann et al. (2015) and Broadbent et al. (2009). These research show that the elderly are able to accept robots as a part of their lives. In the study done by de Graaf et al. (2015), the participants are willing to let the robot stay in their house with them, and they would prefer a more social robot that they could interact more with. Studies by Kamide et al. (2013) and Prakash et al. (2015) also showed that elder people gave a higher evaluation to humanoids than the younger-age group.

For Malaysian elders, there is reason to believe that they are willing to accept robots as a part of their lives. In a local study (Goh et al., 2013), they found that there are not enough caregivers for the elderly and with high costs to boot. The elderly in our country are mostly independent people and would not want to be a burden to their families and the government. Therefore, while they are still capable of taking care of themselves, especially for those who choose to live alone, a live-in companion with minimal hassle would be very helpful for their psychological well-being.

The objective of this research is to find out the needs of elderly people in Malaysia. In terms of companionship and robotics, which choice of criteria takes precedence over the others for them. The research answers the question of ‘What are the needs of the elderly in Malaysia?’ It aims to look at the criteria elderly Malaysians require in a robotic companion.

2. Methodology

The methodology for this survey is through questionnaire surveys that were administered to 80 elderly people in Petaling Jaya area. These participants were randomly selected. They were asked to answer a set of questions that were designed to identify their level of acceptance on robotic companions. Data for the survey was analyzed using the Statistical Package for Social Sciences (SPSS) software that includes descriptive statistical methods like mean, mode and standard deviation.
3. Results

In this section, the tables will show the frequencies, percentages, mean and standard deviation of each dimension or question and the items involved. A discussion of the results will be in the next section.

Table 1: Frequency, percentage, mean and standard deviation for Type of Robot.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No preference</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Pet</td>
<td>28</td>
<td>35.0</td>
</tr>
<tr>
<td>Mechanical</td>
<td>11</td>
<td>13.8</td>
</tr>
<tr>
<td>Humanoid</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>Android</td>
<td>24</td>
<td>30.0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.39
Std. Deviation: 1.307

Table 1 shows the frequency, percentage, mean and standard deviation for the type of robot that participants prefer. According to the statistics, they prefer robots that look like pets with a percentage of 35% (n=28). After that, their preference is towards androids with 30% (n=24), which are robots that look exactly like humans. With a percentage of 18.8% (n=15), humanoids are chosen which have human-like characteristics. Finally, 13.8% (n=11) is given to robots with a mechanical look and 2.5% (n=2) have no preference.

Table 2: Frequency, percentage, mean and standard deviation for Size of Robot.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small animal</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>Small child</td>
<td>32</td>
<td>40.0</td>
</tr>
<tr>
<td>Average adult</td>
<td>18</td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 1.85
Std. Deviation: .765

In Table 2, a percentage of 40% (n=32) chose the size of an average small child, followed by the size of a small animal with 37.5% (n=30). The rest of the participants chose the size of an average adult with a percentage of 22.5% (n=18).
Table 3: Frequency, percentage, mean and standard deviation for Need of Communication Module.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>62.5</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 1.38  Std. Deviation: .487

Table 3 indicates that 62.5% (n=50) of participants agree that there should be a communication module between robots and elderly humans whereas 37.5% (n=30) disagree with the idea of a communication module.

Table 4: Frequency, percentage, mean and standard deviation for Starting of Communication.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>Human</td>
<td>65</td>
<td>81.3</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 1.81  Std. Deviation: .393

From Table 4, it can be seen that 81.3% (n=65) of the elderly feel that they should start communication first and 18.8% (n=15) prefer that the robot starts the conversations between them.

Table 5: Frequency, percentage, mean and standard deviation for Type of Companion.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No preference</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Facts</td>
<td>31</td>
<td>38.8</td>
</tr>
<tr>
<td>Polite</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>Playful</td>
<td>23</td>
<td>28.7</td>
</tr>
<tr>
<td>Listener</td>
<td>11</td>
<td>13.8</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Mean: 2.15  Std. Deviation: 1.126

In Table 5, a majority of participants with 38.8% (n=31) chose a companion robot that can give out facts. Then, 28.7% (n=23) of the elderly prefer a playful type of companion whereas 17.5% (n=14) chose a companion that is polite. 13.8% of participants prefer a companion robot that is a good listener and 1.3% (n=1) has no preference.
Table 6: Frequency, percentage, mean and standard deviation for Type of Voice.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No preference</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>27.5</td>
</tr>
<tr>
<td>Female</td>
<td>57</td>
<td>71.3</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| Mean        | 1.70          |
| Std. Deviation | .488        |

Table 6 shows that 71.3% (n=57) of participants have preference for a female voice but 27.5% (n=22) of them prefer the male voice. Only 1.3% (n=1) has no preference of type of voice for the robot companion.

Table 7: Frequency, percentage, mean and standard deviation for Benefit for Lonely Elders.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>65</td>
<td>81.3</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| Mean | 1.19          |
| Std. Deviation | .393        |

From Table 7, it can be seen that a majority of the participants with a percentage of 81.3% (n=65) feel that an elderly who lives alone will benefit from having a robot as a companion. On the other hand, 18.8% (n=15) feel there is no benefit for a lonely elder to have a companion robot.

Table 8: Frequency, percentage, mean and standard deviation for Necessity of Robotics.

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency (n)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very necessary</td>
<td>7</td>
<td>8.8</td>
</tr>
<tr>
<td>Necessary</td>
<td>46</td>
<td>57.5</td>
</tr>
<tr>
<td>Unnecessary</td>
<td>27</td>
<td>33.8</td>
</tr>
<tr>
<td>Very unnecessary</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| Mean | 2.25          |
| Std. Deviation | .606        |

In Table 8, 57.5% (n=46) of participants feel that robotics is necessary in the lives of the elderly. About 33.8% (n=27) feel that robotics is unnecessary whereas 8.8% (n=7) feel that it is very necessary for the elders. None of them feel that robotics is very unnecessary.
4. Discussion

Between the different types of robots, which are the pet type, a mechanical type, a humanoid and an android, the majority of participants chose the pet type. This is probably because the pets look cute, less dangerous and are familiar to them. The second choice, which is the android, looks very similar to a human therefore it is perceived to be very helpful and is more suitable to have a conversation with. Those who prefer the humanoid and mechanical type feel that those two types are less scary and actually look and feel like a robot.

With a choice of three sizes, which are the size of a small animal, the size of a small child and the size of an average adult, they prefer the middle choice which is not too intimidating but not too small either. This size also means that they will not easily trip over the robot if it happens to be on the floor near them. A robot that is as tall as them seems a bit intimidating and uncomfortable.

Most of the participants agree that there should be communication between robots and the elderly. The robots shouldn’t just do things for you but should also be able to talk with you. Having said that, the participants would like to start communication with the robots first instead of the other way around. Therefore, they will be more comfortable and don’t have to go through a conversation when they don’t want to.

Among the four types of companion the participants were given, they prefer a robot that gives out facts like the weather report and the television programme. This indicates that a robot must be useful to them. The next choice for a companion robot is a robot that is playful and likes to tell jokes. Participants want a robot that can make them happier. Then, comes the third choice which is a polite robot and answers them respectfully with sentences like ‘Yes madam’, ‘Of course sir’ and so on. A few of the participants enjoy the company of a good listener with occasional prompts like ‘really? What happened?’ and ‘tell me more’.

A majority of the participants prefer a female voice to a male voice, the higher tone of voice is probably more comfortable and familiar to them. They agree that an elderly who lives alone will benefit from a robot companion and that robotics is necessary in the lives of the elderly. This shows that they are aware of the benefits of a robot companion and are open to the idea of this technology if the need arises.
5. Conclusion

The essential criteria in this study are that the elderly find it necessary to have robotics in their lives and that robots and humans should be able to communicate with each other. A majority of them believe that lonely elders will benefit from having a robotic companion. This needs analysis provides some insight into the thoughts and perceptions of Malaysian elders towards robotics. Although there are some limits to the study, this is a good start in finding out the needs and perceptions of the elderly towards robots before introducing this type of technology to them.

REFERENCES


Conclusion

The essential criteria in this study are that the elderly find it necessary to have robotics in their lives and that robots and humans should be able to communicate with each other. A majority of them believe that lonely elders will benefit from having a robotic companion. This needs analysis provides some insight into the thoughts and perceptions of Malaysian elders towards robotics. Although there are some limits to the study, this is a good start in finding out the needs and perceptions of the elderly towards robots before introducing this type of technology to them.

REFERENCES

Exploring the Basic Elements of Information Literacy Standards for Malaysian Secondary School Students
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ABSTRACT
Information literacy is an essential skill and is a prerequisite for lifelong learning education. The advent of information age requires schools to train students to become information literate people because information literacy is a necessary basic condition for survival in the 21st century. The literature shows that the development and progress of information literacy education (ILE) in Malaysia face a lot of challenges and its implementation is slower than expected. To date, we still do not have a National Information Literacy Standards for secondary school students in Malaysia. This shortcoming has given rise to the research problem that have inspired this study. The main purpose of this study is to identify the basic elements of information literacy standards/indicators for Malaysian secondary school students. A content analysis was employed to identify these basic elements of information literacy standards/indicators, by taking information literacy standards of other countries such as AASL 1998, ALA/ACRL 2000, ANZIIL 2004, AASL 21st 2007, NETS.S ISTE 2007, SCONUL 2011 as references. The data analysis process was assisted by the Atlas. Ti software to code all the information literacy standards and frameworks. Five main domains of information literacy standards/indicators have been identified: Consciousness, knowledge, ability, communication and collaboration, and moral and values. Further studies could focus on establishing an evaluation system for measuring information literacy levels of Malaysian secondary school students.

Keywords: Information literacy, information literacy standards, content analysis.
1. Introduction

There is no denying fact that our adolescents today are living in a world which is full of temptation and increasingly more complex problems and challenges than we had. In the age of globalization and information technology in which Breivik (2005) described as “a world with and overabundance indeed, a tidal wave of information” (Breivik, 2005), most of us will readily agree that schooling needs to be reconfigured in order to help students to gain what are broadly labeled as “21st century skills”. The advances of science and technology as well as the internet helps human beings open wide avenue of knowledge, teachers are no longer the only source of knowledge. In the words of Andreas Schleicher, OECD Education Directorate (2011), “A generation ago, teacher could expect that what they taught would last their students a lifetime. Today, because of rapid economic and social change, schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don’t yet know will arise.” (Schleicher, 2011). In parallel to this, many recommendations of “21st century skills” have been made by individuals such as Howard Gardner, and groups such as the Metiri Group.

In his book, ‘5 Minds for the Future’ (Gardner, 2006), Howard Gardner reminds us that current formal education still prepares students for the world of past, not for the world of future. He criticizes that we acknowledge the importance of science and technology, but do not teach scientific ways of thinking, and we understand the factors of globalization but have not made much efforts in preparing students, so that they can survive in the world which is very much different from anything we could imagine. (Gardner, 2006). The following five minds, proposed by Gardner, comprise the notion of skills, values, attitudes and knowledge, provide us with crucial hints in education discourse.

1) The Disciplined Mind: “Individuals without one or more disciplines will not be able to succeed at any demanding workplace and will be restricted to menial tasks.” (p.18)

2) The Synthesizing Mind: “Individuals without synthesizing capabilities will be overwhelmed by information and unable to make judicious decisions about personal or professional matters.” (p.18)

3) The Creating Mind: “Individuals without creative capacities will be replaced by computers and will drive away those who do have the creative spark.” (p. 18)

4) The Respectful Mind: “Individuals without respects will be not worthy of respect by others and will poison the workplace and the commons.” (p.19)

5) The Ethical Mind: “Individuals without ethics will yield a world devoid of
decent workers and responsible citizens: none of us will want to live on that desolate planet.” (p.19)

In 2003, the North Central Regional Education Laboratory (NCREL) and the Metiri Group produced a 21st century skills framework. The Metiri group’s enGauge 21st century skills framework is born out of assumption that students need to acquire different, evolving skills set to cope and to strive in this changing society. They claim that “The enGauge list of 21st-century skills is intended to provide the public, business, industry, and education with a common understanding of and language for discussing the skills needed by students and workers in this emerging Digital Age. The enGauge project is based on the premise that preK-12 schools should incorporate 21st-century skills and proficiencies into school curricula within the context of academic standards.”(Lemke, 2002). The skills are organized into four categories: digital age literacies, inventive thinking, effective communication, and high productivity.

In September 2003, the first international conference of information literacy experts from 23 countries was convened in Prague. At the end of the conference, The Prague Declaration “Towards an Information Literate Society” advocated that “Information Literacy encompasses knowledge of one’s information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of lifelong learning.”(UNESCO, 2003)

Apparently, information literacy is being recognized today as an essential skill for the 21st century. Many initiatives and programmes have been developed and implemented in many countries in formal education settings. In Malaysia, the discussion about information literate society was once raised when Tengku Mohd Azman Shariffadeen, the President and Chief Executive Officer of the Malaysian Institute of Microelectronic Systems (MIMOS), made a statement in 1997 about an information literate society in the Malaysian context. (Edzan, 2008). According to Tan (2014), although the literature suggests that information literacy education is embedded and integrated in the Malaysian Integrated Primary (1982), the Secondary School Curriculum and the Curriculum Standard for Primary School (2012-2015). However, there is no concrete empirical research to confirm or deny the implementation of information literacy in the school curriculum.(Tan, 2014). Saidatul Akmar Ismail (2014) in his report of factors affecting the implementation of
information literacy education in Malaysian primary schools, concluded that these problems were associated with individual, organizational, social and cultural factors. (Ismail, 2014). Tan (2014) on the other hand, suggested four organizational factors influencing the implementation of ILE, mainly Professional Development, Teaching and Learning Strategies, Information Literacy Policies & Standards and Infrastructure. Her study proposes an IL Implementation framework that emphasizes two main contributors to the successful implementation of ILE in Malaysian schools: School Librarians’ Readiness and the Organizational Factors.(Tan, 2014).

1.1 Statement of Problem
Information literacy is an essential skill and is a prerequisite for lifelong learning education. The advent of information age requires schools to train students to become information literate people because information literacy is a necessary basic condition for survival in the 21st century. In the case of Malaysia, the literature shows that the development and progress of information literacy education (ILE) in Malaysia face a lot of challenges and its implementation is slower than expected,(Edzan, 2008; Singh & Tan, 2008; Tan, 2014). Study needs to be carried out immediately in order to address this problem. But, what is the content of information literacy? What would be considered to have certain quality of information literacy? How these qualities are reflected in the integrated curriculum in secondary school education? All these questions need to be answered before a comprehensive model of information literacy for Malaysian secondary school students can be developed. To date, we still do not have a National Information Literacy Standards for secondary school students in Malaysia. This shortcoming has given rise to the research problems that have inspired this study.

1.2 Purpose of the Study and Research Question
The main purpose of this study is to identify the basic elements of information literacy standards/indicators for Malaysian secondary school students. The research question is: What are the basic elements of information literacy standards/indicators that can be developed from these standards and guideline that are suitable for secondary school students in Malaysia?

1.3 Significance of the Study
This study is significant in establishing a National Information Literacy Standards that is suitable for assessing the information literacy ability and promoting the information literacy education in secondary school in Malaysia.
In this paper, we will first offer an overview of the information literacy standards and guidelines which are most frequently referred worldwide. By using content analysis research method grounded on the analysis of the standards and guidelines mentioned above, we then code the individual elements of each of these standards and guidelines to determine similarities and differences, from here we develop a set of overarching categories that attempt to integrate these different perspectives and through this process, we hope to offer a standards/indicators that will suit the Malaysian secondary school needs.

2 Related Literature

2.1 What is Information Literacy?

It is agreed that the term “information literacy” was first proposed in 1974 by Paul Zurkowski, the President of the Information Industry, USA, refers to the ability and skills to use a large number of information tools and resources, to search, evaluate information and can effectively solve the given problem. After nearly 40 years of research and study in this field, the meaning of information literacy is evolving and changing.

In 1992, Doyle in her report on the “Final Report to National Forum on Information Literacy” (Doyle, 1992), has made a more comprehensive definition of information literacy. She suggests that an information literate person is one who:

- Recognizes the need for information.
- Recognizes that accurate and complete information is the basis for intelligent decision-making.
- Formulates questions based on information needs.
- Identifies potential sources of information.
- Develops successful search strategies.
- Accesses sources of information including computer-based and other technologies.
- Evaluates information.
- Organizes information for practical application Integrates new information into an existing body of knowledge.
- Uses information in critical thinking and problem solving. (Doyle, 1992)

Stepping into the 21st century, the technology greatly expands access to information. The changing of learning environment from limited information resources to an abundance of information resources creates a need to address a number of other issues including privacy, safety and ethical conduct. (Woodard, 2002). Parallel with the
emphasis on 21st century skills, the meaning of information literacy will include communication and collaboration as well as ethical use of information.

2.2 Overview of Information Literacy Standards and Guidelines
Several information literacy standards have been developed mostly in the western and European countries. For the purpose of this study, we have deliberately chosen six renowned and widely used information literacy standards as our references. The following section provides summaries of each of these standards.

2.2.1 Information Literacy Standards for Student Learning, by the American Association of School Librarians (AASL) and Association for Educational Communications and Technology (AECT), 1998. [Referred to in the rest of the paper as AASL 1998]
The American Association of School Librarians (AASL) and Association for Educational Communications and Technology (AECT) in their landmark publication in 1998, Information Power: Building Partnerships for Learning, includes the full content of Information Literacy Standards for Student Learning. According to the characteristics of primary and secondary students, the set of standards describes three main categories, namely information literacy, independent learning and social responsibility. Each of these categories is further divided into 3 standards which contain 3 to 5 standards and sum up with 29 indicators. (Librarians & Communications, 1998).

2.2.2 Information Literacy Competency Standards for Higher Education, by the Association for College and Research Libraries, 2000. [Referred to in the rest of the paper as ALA/ACRL 2000]
The Information Literacy Competency Standards for Higher Education, published by Association for College and Research Libraries in 2000, aims at promoting the information literacy competencies among the students in colleges and universities. The standards include 5 core competency standards, each standard illustrated by the specific performance indicators and outcomes. (Association, 2000)

2.2.3 Australian and New Zealand Information Literacy Framework: Principles, Standards and Practice, by the Council of Australia University Librarians (CAUL) and Australia-New Zealand Institute for information literacy, 2004. [Referred to in the rest of the paper as ANZIIL 2004]
By reviewing and adapting the US Information Literacy Competency Standards for Higher Education, the CAUL established the Australian and New Zealand
Information Literacy Framework in 2000, which was specifically intended for higher education. The framework was reviewed and edited again in 2004 to form the Australian and New Zealand Information Literacy Framework: Principles, Standards and Practice. The framework consists of 6 core standards, with the learning outcomes listed for each core standards. (Bundy, 2004)

2.2.4 Standards for the 21st Century Learner, 2007, by the American Association of School Librarians (AASL). [Referred to in the rest of the paper as AASL 21st 2007]
In 2007, the AASL, presented the Standards for the 21st Century Learner, to provide an overview of the skills, resources and tools that students need to have in order to survive in the 21st century. Four specific standards were identified and each standard was illustrated by relevant skills, dispositions, responsibilities, and self-assessment strategies. (AASL, 2007)

2.2.5 National Educational Technology Standards for Students (NETS•S), published by the International Society for Technology in Education (ISTE 2007). [Referred to in the rest of the paper as NETS.S ISTE 2007]
In 1998, the International Society for Technology Education (ISTE) issued the first edition of National Educational Technology Standards (NETS·S). Subsequently in 2007, at the annual meeting of the National Education Information (NECC), the ISTE published the second edition of National Educational Technology Standards·Students (NETS·S). The standards have been reclassified into 6 dimensions, followed by 14 indicators, to provide a new reference standard for the students in measuring their ability to understand the use of technology. (ISTE, 2007)

2.2.6 The SCONUL Seven Pillars of Information Literacy, by the SCONUL Working Group on Information Literacy, Society for College, National and University Libraries, 2011. [Referred to in the rest of the paper as SCONUL 2011]
The Seven Pillars of Information Skills model was first introduced by the SCONUL Working Group on Information Literacy in 1999. However, in 2011, considering that there was a need to update and expand the model to reflect more clearly the range of different terminologies and concepts of information literacy, The SCONUL Seven Pillars of Information Literacy was established. There are seven pillars or standards, each pillar is further described by a series of statements relating to a set of skills/competencies and a set of attitudes/understandings. (SCONUL, 2011)
3 Methodology

Based on the literature review, a content analysis was employed to identify these basic elements of information literacy standards/indicators, by taking information literacy standards of other countries such as AASL 1998, ALA/ACRL 2000, ANZIIL 2004, AASL 21\textsuperscript{st} 2007, NETS.S ISTE 2007, SCONUL 2011 as references. The data analysis process was assisted by the Atlas. Ti software to code all the information literacy standards or frameworks.

4 Proposed Basic Elements of Information literacy Standards

The six standards and frameworks mentioned in Section 2 provide us with different perspectives on what is needed to be considered as an information literate person. Based on the literature review, we broke apart these standards and frameworks into individual elements. These individual elements were then reviewed and re-categorized in order to develop a coding scheme.

<table>
<thead>
<tr>
<th>Coding Scheme</th>
<th>Awareness</th>
<th>Need</th>
<th>Skills</th>
<th>Understandings</th>
<th>Define</th>
<th>Access</th>
<th>Manage</th>
<th>Integrate</th>
<th>Evaluate</th>
<th>Create &amp; Innovate</th>
<th>Communication &amp; Collaboration</th>
<th>Moral &amp; Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consciousness</td>
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<td></td>
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<tr>
<td>Knowledge</td>
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<tr>
<td>Ability</td>
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</tbody>
</table>

Figure 1: A coding scheme for analyzing the selected standards/frameworks of Information literacy

As shown on Figure 1, after reviewing and re-categorizing the individual elements in the six standards and frameworks, we have identified five main domains which are essential for the information literacy standards/indicators in Malaysia: Consciousness (sub-domains: aware, need) knowledge (sub-domains: skills, understandings), ability
communication and collaboration, and moral and values. The coding scheme for basic elements of information literacy standards was deliberately chosen in order to suit the multicultural, multi-racial, multilingual, and multi-religion society of Malaysia. In order to achieve national unity, the pluralistic nature of Malaysia requires all members of the society to have qualities of mutual respect and tolerance. Nevertheless, the effort in achieving national unity in this multicultural society is an arduous task, because there is a diversity of values that people hold, some of which may be incompatible with each other. So, our children need to have the ability to navigate and appreciate the world of values. They need to analyze everyday situations in term of moral relevant characteristics and make judgements on what behaviors are appropriate for themselves and others, they need to communicate and collaborate among each other. Our children need to understand the history, cultures and tradition of each ethnic group that make up our society, they need to be sensitive to the issues that occur internally and externally. Therefore, other than “knowledge” and “ability” which were frequently cited in all of the western information literacy standards, we also emphasize on “Consciousness”, “Communication and collaborate” and “Moral and values”. We describe each of these domains and sub-domains in greater detail below.

4.1 Consciousness
In the process of information searching, some people may have a strong sense in digging out the valuable information, while others may not have. This is due to the individual’s different strength of information consciousness. The mastery of information skills largely depends on the level of information consciousness.

From the analysis, quite a number of standards placed information consciousness as an important element. Two sub-domains related to consciousness are aware and need. Having information consciousness very much depends on the individual awareness of information, that he can assess current knowledge and identify gaps (SCONUL 2011). Most of the standards or frameworks agreed that the ability of recognizing the need for information is an essential element. In other words, an information literate person is always sensitive and aware of information need, can identify what information is valuable and needed and can determines the nature and extent of the information needed.
4.2 Knowledge
Both AASL 21st 2007 and NETS.S ISTE 2007 frameworks emphasized the importance of knowledge, the sub-domains in this area are skills and understandings. Coincidentally, both frameworks were intended in promoting the information literacy competencies of school students. The implications from the analysis include:

1) For the school students, the basic knowledge of information skills and information law are needed for them to engage actively and responsibly in this information age.
2) As an information literate person, the student is able to use his prior knowledge as context to construct new knowledge.
3) School should allocate some times in imparting the basic knowledge of information skills.

4.3 Ability
This domain is among the most frequently cited essential elements for an information literate person. The sub-domain of ability includes: define, access, manage, integrate, evaluate, and create and innovate. The abilities mentioned above are crucial for problem solving and innovation. Problem solving is often conceptualized as the use of critical thinking skills towards the effective resolution of a specific problem or towards a specific end goal. (Mishra & Kereluik, 2011). As what has been mentioned earlier, “schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don’t yet know will arise.” (Schleicher, 2011), besides the problem solving, our students need to equip with creative and innovative abilities so that they can play an active role in this 21st century.

4.4 Communication and collaboration
Half of the standards and frameworks cited these elements as crucial in information literacy. From the information perspective, communication involves the ability to articulate information and ideas effectively to various audiences using a variety of media and formats. Collaboration covers the ability to collaborate with others to exchange ideas, develop new understandings, make decision, and solve problem. As working with diverse group becomes of the upmost important in our increasingly globalized culture and economy, communication and collaboration becomes a “must” competence for our students.
4.5 Moral and Values

In the age of globalization and information technology, the progressive and materialistic civilization enables us to enjoy the fruits of modernization and technological revolution, at the same time, it also brings a series of information ethics questions such as violence in network game, network security, infringement of intellectual property rights, network bullying, network syndrome etc. Hence, moral and values become extremely important elements in nurturing students to become responsible citizen. From the analysis, these elements too are among the most often cited in cultivating students to become information literate. For example, standard six in ANZIIL 2004 describes that “The information literate person uses information with understanding and acknowledges cultural, ethical, economic, legal, and social issue surrounding the use of information.” (Bundy, 2004). AASL 2007 in standard 8 on the other hand, advocates that “The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology.” (Librarians & Communications, 1998)

5 Conclusion and Recommendation

In this study, we have reviewed and evaluated the six renowned and widely used information literacy standards and frameworks mentioned in Section 2. After reviewing and re-categorizing the individual elements of the standards and frameworks, we established a coding scheme that suits the context of Malaysia. Under this coding scheme, five main domains of information literacy standards have been identified, namely: Consciousness (sub-domains: aware, need) knowledge (sub-domains: skills, understandings), ability (sub-domains: define, access, manage, integrate, evaluate, create & innovate), communication and collaboration, and moral and values.

Considering that Malaysia is a developing country, information resources and software and hardware tools for information literacy education are still scarce especially for schools in rural area. Moreover, most of the schools still do not devote any school time for information literacy education. Therefore, it is understandable that the development of information literacy education is slow. The findings of this study enable us to establish a National Information Literacy Standards that is suitable for assessing the information literacy ability and promoting the information literacy education in secondary school in Malaysia. Further studies could focus on establishing an evaluation system for measuring information literacy levels of Malaysian secondary school students.
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Exploring the experiences of teachers with the children with autism in inclusive settings

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Abstract

Autism Spectrum Disorder (ASD) is a lifelong neuro-developmental disorder that typically involves global impairments in social skills and in verbal and non-verbal communication, as well as the presence of stereotyped patterns of behaviours and interests (Hall, 2012). Hence, the education of young people with ASD in inclusive school settings can be challenging. In recent times, greater understandings of teaching and learning practices has provided increased efficacy, however, there remain considerable arenas where there are wide gaps in the field. This study set out to make a contribution to one aspect by undertaking a qualitative exploration of the experiences of the students’ teachers in educational settings in order to determine what quality teaching looks and feels like for teachers of children with ASD. The study provides new knowledge in the field of autism research as it sets out to explore the experiences of teachers of students with autism aged 6-12 years in an Australian setting, and to consider if there is insight that can be transferred to teachers in other countries in order to benefit from this insight. The researcher was interested in teacher perceptions about the children with ASD and their performances. This research was exploratory, meaning that the researcher aimed to look into an education system other than researcher’s own country; not to create a theory or to develop a proposition, but simply to investigate and explore. It is framed in a qualitative methodological paradigm with data derived from in-depth face-to-face interviews conducted with a purposeful sample of two teachers who work with the children in inclusive school settings and extensive classroom observations. Interviews were undertaken with the teachers in the school. The interviews took place when the teachers were free after the class or sometimes in the playground. The teacher gave their opinion based on their experiences. They were asked about their experiences to work with the children. Content analysis enabled themes to be explicated from the
data. The findings showed that teachers in this study display inclusive practices, but still have much to learn in order for their practice to be truly inclusive. Teachers are able to understand children with ASD and to provide schools with valuable information about them, teacher also maintained the usual schooling practices for all the children in that they had to study the national curriculum, but with differentiation where necessary. Teachers also maintain home school communication. They maintain regular contact with parents. It is expected that findings from this study might be used to inform educational systems and individual schools about the experiences of teachers of students with ASD as the children engage in schooling. Furthermore, the findings contribute to the field of ASD studies by expanding understandings of how inclusive education influences the development and learning of these children. The insight gained from this research has the potential to be applied to better support children with autism in all education settings, both in countries in the global north and global south (Connell, 2007). The findings assist in raising awareness and understanding of the benefits for students that accrue with schooling and the role teachers play in assisting children with ASD to achieve early academic and social outcomes. Furthermore, the research findings also have the potential to contribute to building home-school partnerships.

**Keyword:** Inclusion, Autism Spectrum Disorder (ASD), teacher experiences, exploratory method
ABSTRACT
The potential of Mobile Instant Messaging (MIM) to support collaborative learning because of its powerful features as speed, effectiveness and no cost has gain interest in education. Thus, this study aimed to identify a need to develop the Collaborative MIM learning implementation model. This survey was based on lecturers’ perceptions and level of acceptance and intention to use MIM if incorporated in the formal course. This study involved pre-service program lecturers in Malaysia Institute of Teacher Education (IPGM). The instrument used for this study is a set of needs analysis survey questionnaire which is constructed based on Unified Theory of Acceptance and Use of Technology (UTAUT). Data were analyzed using Statistical Package for Social Science (SPSS) that included the descriptive statistical methods like mean and standard deviation. The findings indicated that the lecturers owned at least one mobile technology device with their devices have at least the minimum required mobile capabilities. This concluded that the lecturers have the necessary technology access for the incorporation of MIM in their formal course. They also showed high acceptance level and intend to use MIM in their formal course. Thus, the findings necessitated the need for the study to develop the model.

Keywords: Mobile Instant Messaging (MIM), mlearning, collaborative learning, implementation

Introduction
The new trend in the ICT that incorporated mobile learning (mLearning) in formal education has developed tremendously. Some researchers have for the most part shed a very positive light on the potential of the role that mobile devices may play in education (Stockwell & Hubbard, 2013). Analisa Hamdan & Rosseni Din (2013) in their research pointed that mLearning can be implemented in the education system in Malaysia as it is inexpensive, does not require high costs and some educational applications available for android is offered for free. Other than that, mlearning allows the learner to access information anytime and anywhere (Saedah Siraj, 2004). Furthermore, aligned with the current mobile technology trend, mLearning in Malaysia is supported through the Critical Agenda Projects (CAP) in National Higher Education Strategic Plan (NHESP) (PSPTN, 2013). Through this CAPs project, together with the fact that majority of higher institution students own the devices, should provide the opportunity to increase learning effectiveness through mLearning (Muhammad Ridhuan Tony Lim, 2014).

Hence, it is about time to incorporate mlearning for teaching and learning due to the fact reported in a Google survey report (2014) that the use of smartphones among Malaysians are among the highest in the world and is one of five places in the world with the use of smart phones is much higher than the computer at a level of 51% versus 39%. Thus, this indicate that there is large potential in using mobile devices for teaching and learning as mobile device usage is higher than that of the computer. As more people have access to mobile
devices, mlearning may be the way forward for teaching and learning for the future in Malaysian education.

The potential of mobile phones, particularly mobile instant messaging (MIM) has become popular and opened up new opportunities of interaction and collaboration between teachers and learners (Rambe & Bere, 2013). Many researches point at the capacity of MIM to foster knowledge sharing, enhance peer-based support on education matters and nurture knowledge communities (Chipunza, 2013). With various features in the application of MIM, it offers active collaborative learning among users. In addition to text messaging, user can send each other images, video, and audio media messages. This combination of functionality and features has led to MIM being promoted as an emerging collaborative learning tools and they are potentially will be used to support group-based collaborative learning tasks.

MIM applications such as WhatsApp, Line, WeChat, and many others alike have been phenomenally popular in the communication world. However, the most recent popular MIM is WhatsApp application. According to a report in The Wall Street Journal, in April 2015, WhatsApp announced it had reached 800 million users and the continued growth allowed it to reach one billion users by the end of 2015 (Utusan Online, 2015). This phenomenon in the growing used of MIM particularly WhatsApp in today’s world, indicates that it is a great potential of incorporated MIM in education other than its original function solely as a social networking tool.

Problem Statement

The positive reception among Higher Education Institutes (HEIs) to the e-Learning has broadened its use in almost all universities in Malaysia. Most of the universities have developed their own Learning Management System (LMS) that supports traditional way of teaching and learning which is seen as evident of the readiness for the online delivery learning. Unfortunately, lack of a clear e-Learning policy, the absence of a clear governance structure, and the lack of a clear line of responsibility on the task of planning and implementing e-Learning are other challenges encountered in relation to the governance of e-Learning (Embi, 2011). Furthermore, based on the analysis of SWOT project conducted, it was found that most HEIs have sufficient e-learning infrastructure but lacking of a strategic plan were found as one of the weakness in implementing online learning (Raja Maznah, 2004).

Focusing more to provide an ICT infrastructure to support online learning compared to firm plan for using ICT as a tool for teaching and learning, course development, course structure and assessment are among the challenges faced by lecturers in integrating e-Learning in their teaching and learning (Azizan, 2010). As pointed out by Azizan (2010), planning for use of the ICT in teaching and learning seems to be still in the drawing boards or the mind of the person responsible for managing the e-learning.

The emerging trend of using mobile learning (mLearning) in teaching and learning is seen able to address the issue of implementing online learning. The multifunction of mobile phone has led to mLearning being promoted as powerful collaborative learning tools and they are increasingly being used to support group-based collaborative learning tasks. Many studies have been generally discussed lately of the surging popularity of mobile devices as technologies that support collaborative learning (Echeverría et al., 2011; Hwang, Huang, & Wu, 2011; Koole, 2009). The main reasons behind this stems from its spontaneous, portable, personalized, ubiquitous and situated characteristics. Regardless of the tremendous potential of mobile phones to activate deep student engagement with content, MIM remains one of the least exploited functionalities of mobile devices in HEIs (Rambe & Bere, 2013).

The potential of MIM to support collaborative learning because of its powerful features as speed, effectiveness and no cost will continue to gain important in education.
The potential of MIM to support collaborative learning because of its powerful personalized, ubiquitous and situated characteristics have been generally discussed lately of the surging popularity of mobile devices as networking tool. Growing used of MIM applications such as WhatsApp, Line, WeChat, and many others alike have been phenomenally popular in the communication world. However, the most recent popular MIM and features has led to MIM being promoted as an emerging collaborative learning tools and send each other images, video, and audio media messages. This combination of functionality knowledge communities (Chipunza, 2013). With various features in the application of MIM, to foster knowledge sharing, enhance peer-based support on education matters and nurture teachers and learners (Rambe & Bere, 2013). Many researches point at the capacity of MIM to bridge formal and informal learning (Cook, Pachler, & Bradley, 2008), support the participation of muted voices (Ng’ambi, 2011) and support flexible personalized learning (Rambe & Bere, 2012).

Yet, a few studies had been conducted in the implementation guideline of MIM for collaborative learning especially in Malaysia context. According to (Kirschner, Strijbos, Kreijns, & Beers, 2004), one of the major pitfalls of the design of online collaborative learning is by the absence of a proper pedagogy for this. Above all, online learning demands careful planning of all learning activities considered essential amid a lesson or a course. In fact, within e-learning contexts, teaching cannot be performed as a spontaneous activity but as a conscious and carefully-planned procedure (Kordaki & Siempos, 2010).

**Purpose of the Study**

The general purpose of the study is to develop the Collaborative Mobile Instant Messaging Learning (CMIML) implementation model. The model aimed at proposing a guide on how MIM could be incorporated in a formal classroom not only as a complement but to augment formal learning. Thus, this study is conducted to identify the needs for the development of the CMIML implementation model based on lecturers’ views.

**Research Questions**

The needs analysis phase seeks to answer the following research questions:

1.1 What are the lecturers’ perceptions on their current ways of teaching and learning?

1.2 What are the lecturers’ perceptions on implementing ICT in teaching and learning?

1.3 What are the lecturers’ access to mobile devices and the capability level of the devices?

1.4 What are the lecturers’ level of acceptance and intention to use MIM learning if incorporated into the formal course?

**Significance of the study**

This study is in line with the seventh shift in the 11 major shift to transform the country's education system in Malaysia Education Blueprint (PPPM) (2013-2025) that utilize ICT to enhance the quality of learning in Malaysia. Thus, the results from this study are expected to provide learning benefits and drawing implications for online collaborative task design and pedagogy to various parties in the field of education.

The effort to instill and increase the capacity and skills in the use of ICT among teachers needs to be done since college courses while they are away. Here, their interests can be enhanced so as to form a positive attitude towards the use of ICT. The institutions should ensure that all the facilities and accessibility are always in a satisfactory condition. Trainees should be given ample opportunity to raise the interest and skills in the field of ICT. Indirectly, they will make sure they have a positive perception and thus form a positive attitude towards the use of ICT in teaching and learning (Rahmad Sukor, Shahrir, Zainudin, & Mohd Ali, 2008).

The use of technology as a tool in the implementation of Collaborative Mobile Instant Messaging Learning (CMIML) will demonstrate the ability of lecturers to become effective
facilitators of learning. The role of the lecturers has changed from being the provider of knowledge to a facilitator of learning to scaffold students as they collaborate on problem tasks.

Hence, the findings of this study is useful to policy makers, lecturers, instructors and instructional designers as it not only determines the feasibility of the CMIML module, it also provides the guidelines and considerations that are required in a collaborative mLearning environment.

Methodology

This study is descriptive and was conducted to explore on lecturers’ perceptions and level of acceptance and intention to use CMIML if incorporated in the formal course. It involved 110 lecturers selected from the pre-service program lecturers at the Institute of Teacher Education in the central zone.

The instrument used to collect the data for this study is a set of needs analysis survey questionnaire. The items for the questionnaire is constructed based on Unified Theory of Acceptance and Use of Technology (UTAUT), a technology acceptance theory proposed by Venkatesh, Morris, Davis, & Davis (2003). This questionnaire uses Likert 5-scale of 1=strongly disagree, 2=disagree, 3= neutral, 4=agree, and 5=strongly agree.

Data were analyzed using the Statistical Package for Social Science (SPSS) version 22 software that included the descriptive statistical methods like mean and standard deviation to determine the needs in developing Collaborative Mobile Instant Messaging Learning (CMIML) implementation model based on lecturers’ view.

Results

This results discusses findings of the research objectives and according to the research questions.

Table 1

Perception on the current teaching

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am comfortable with my current teaching using “chalk and talk” approach</td>
<td>110</td>
<td>2.79</td>
<td>.418</td>
</tr>
<tr>
<td>2</td>
<td>My students enjoy learning with my “chalk and talk” approach</td>
<td>110</td>
<td>2.73</td>
<td>.398</td>
</tr>
<tr>
<td>3</td>
<td>I intend to continue teaching using “chalk and talk” approach</td>
<td>110</td>
<td>2.24</td>
<td>.615</td>
</tr>
<tr>
<td>4</td>
<td>I am interested to use ICT in teaching</td>
<td>110</td>
<td>4.56</td>
<td>.842</td>
</tr>
<tr>
<td>5</td>
<td>My students understand more easily when I integrate ICT in teaching</td>
<td>110</td>
<td>4.21</td>
<td>.768</td>
</tr>
</tbody>
</table>

Table 1 discusses the perception on the current teaching by the lecturers. The finding shows that the lecturers perceive the use of ICT in education will make the students understand more easily. This is evidenced by a mean value of 4.21. However, even though the findings revealed that the lecturers interested to use ICT in teaching (mean value=4.56), a few of them will still continue using "chalk and talk" approach (mean value=2.24) as they perceive it is still relevant to use.

Table 2

Perception on implementing ICT in teaching

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT will increase quality of teaching</td>
<td>110</td>
<td>4.35</td>
<td>.765</td>
</tr>
<tr>
<td>2</td>
<td>ICT will make learning more interesting</td>
<td>110</td>
<td>4.56</td>
<td>.823</td>
</tr>
<tr>
<td>3</td>
<td>ICT facilitates collaborative work among students</td>
<td>110</td>
<td>4.26</td>
<td>.818</td>
</tr>
<tr>
<td>4</td>
<td>ICT makes students feel more autonomous in their learning</td>
<td>110</td>
<td>3.76</td>
<td>.685</td>
</tr>
<tr>
<td>5</td>
<td>ICT is essential in 21st century learning</td>
<td>110</td>
<td>4.59</td>
<td>.854</td>
</tr>
</tbody>
</table>
Table 2 shows the data analysis regarding the perception of lecturers on implementing ICT in teaching. Lecturers perceive that implementing ICT in teaching is essential in 21st century learning. This is evidenced by the mean value of 4.59. The lecturers also believed that using ICT in teaching will promote student-centered learning as evidenced in item no 3 with the mean value of 3.76. As a conclusion, the lecturers perceive that implementing ICT in teaching create many benefits in learning as majority of the mean value for each items is high.

Table 3

<table>
<thead>
<tr>
<th>Types of Mobile Devices Owned by lecturers</th>
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</thead>
<tbody>
<tr>
<td>Mobile Devices</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Mobile Phone</td>
</tr>
<tr>
<td>Smartphone</td>
</tr>
<tr>
<td>PDA</td>
</tr>
<tr>
<td>AV portable player</td>
</tr>
<tr>
<td>Tablet PC</td>
</tr>
</tbody>
</table>

Table 3 shows the type of mobile devices owned by lecturers. The results revealed that mobile (96.4%, n=106) and smartphone (98.2%, n=108) were the types of mobile technology devices mostly owned by the respondent with PDA (21%, n=23) as the least device owned by them. This findings also indicate that the lecturers owns at least more than one mobile technology devices.

Table 4

<table>
<thead>
<tr>
<th>Level of Capabilities of Mobile Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

Table 4 shows the data analysis of level of capabilities of their mobile devices. A minimum Level 2 is suggested to enable incorporation of collaborative mobile instant messaging learning in their formal learning course. The results shows that most of the lecturers’ mobile devices (80.9%, n=89) were at level 3. This findings revealed that the lecturers’ devices have at least the minimum required mobile capabilities that could readily accommodate incorporation of collaborative mobile instant messaging learning.

Table 5

<table>
<thead>
<tr>
<th>Acceptance and Intention to use Collaborative Mobile Instant Messaging Learning (Performance Expectancy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

Table 5 shows the result of lecturers’ expectancy on performance of CMIML to accommodate formal learning. The findings shows that all items received positive perception with the highest mean value of 4.29 where they found CMIML is useful for their course . This findings revealed that the respondents perceived high expectation on the performance of CMIML if it is incorporated in formal learning.
Table 6

Acceptance and Intention to use Collaborative Mobile Instant Messaging Learning (Effort Expectancy)

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>My interaction through CMIML would be clear</td>
<td>4.00</td>
<td>8.38</td>
</tr>
<tr>
<td>2</td>
<td>It would be easy for me to become skilful at using CMIML</td>
<td>3.91</td>
<td>9.7</td>
</tr>
<tr>
<td>3</td>
<td>I would find CMIML easy to use</td>
<td>4.32</td>
<td>8.42</td>
</tr>
</tbody>
</table>

Table 6 shows the result of effort expectancy as the degree of ease in using a proposed system. The findings indicate that respondents would find CMIML easy to use as evidenced by the mean value of 4.32. This is supported by item no 2 that they are positive to become skilful at using CMIML (mean value=3.91). This findings revealed that the lecturers perceive CMIML is convenient and easy to be implemented.

Table 7

Acceptance and Intention to use Collaborative Mobile Instant Messaging Learning (Attitude towards using CMIML)

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I prefer other teaching approach than CMIML</td>
<td>3.21</td>
<td>6.05</td>
</tr>
<tr>
<td>2</td>
<td>CMIML would make teaching more interesting</td>
<td>4.15</td>
<td>6.24</td>
</tr>
<tr>
<td>3</td>
<td>It would be fun teaching with CMIML</td>
<td>4.24</td>
<td>7.3</td>
</tr>
<tr>
<td>4</td>
<td>Using CMIML would be a very good idea</td>
<td>4.18</td>
<td>10.46</td>
</tr>
</tbody>
</table>

Table 7 shows the data analysis of attitude of lecturers towards using CMIML. The results indicate that the respondents were positive in their attitude towards using CMIML. They found that CMIML are more interesting compared to other approach. This is evidence by the mean value of 3.21 for item no 1 inquiring about their preference to use other approach than CMIML. As a conclusion, the lecturers show their interest to use CMIML in their formal teaching course.

Table 8

Acceptance and Intention to use Collaborative Mobile Instant Messaging Learning (Behavioural intention to use CMIML)

<table>
<thead>
<tr>
<th>Item</th>
<th>Descriptions</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I intend to use CMIML for this course as soon as possible</td>
<td>3.68</td>
<td>7.22</td>
</tr>
<tr>
<td>2</td>
<td>I plan to use CMIML for this course in the next semester</td>
<td>4.06</td>
<td>5.64</td>
</tr>
<tr>
<td>3</td>
<td>I predict that I would use CMIML for this course in the next semester</td>
<td>4.09</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Table 8 shows the data analysis of behavioral aspect on intention to use CMIML. The results indicate that some of the lecturers had the intention to use CMIML the soonest possible. It is evidenced by the mean value of 3.68. Thus, overall findings for this aspect revealed that the lecturers were significantly eager and intended to use CMIML in the near future.

Implication and Conclusions
The findings revealed that CMIML is feasible to be incorporated in the formal learning as the mobile devices and technology are readily accessible by lecturers. According to the findings on lecturers’ acceptance and intention to use CMIML, the overall result on all the key constructs (based on UTAUT model) concluded that the lecturers highly accepted CMIML as intervention in their teaching and thus form a positive attitude towards the use of ICT in teaching and learning. Hence, this positive response from the lecturers would justify the need to develop the CMIML implementation model as suggested in this study. Institute of Teacher Education Malaysia (IPGM) as the main body is expected to benefit from the results of this study which could improve the delivery of teaching and learning methods that are more efficient through planning in shaping the framework of the course better.

References


Muhammad Ridhuan Tony Lim, A. (2014). Development of Activity-based mLearning Implementation Model for Undergraduate English Language Learning.


Critical Thinking – A key component of Curriculum

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ABSTRACT

There have been many recent discussions about the trends in education, and in particular curriculum. This paper talks about the importance of critical thinking as an aspect that needs to be incorporated in curriculum across all levels of education. Case scenarios are discussed, where critical thinking has a role to play. The study is an attempt to portray the importance of this important life-long skill that teachers need to inculcate in their students.

Key words: Curriculum, Critical Thinking
ISTEL Conference

Key words: Education policy and practice, curriculum studies, learning, Bhutan
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Abstract

National development policy in Bhutan has long articulated a ‘pressing need to achieve a balance or synthesis between the heritage of the past and a programme of modernization’ (Aris, 1994: 9). This thrust in policy is also visible in the education sector where the national curriculum has been reoriented to include the pillars of the Gross National Happiness policy as a means to balance ‘change’ with the continuity of tradition. This study investigates the perceptions and experiences of teachers in Thimphu and Paro, Bhutan – all of whom are charged with ‘stri[k]ing a balance between progressive development and preserving the tested value system of a traditional society’ (Ministry of Health and Education, 2003: 8). It draws on a set of in-depth interviews with 51 teachers and observational data of a subset of 7 of the interviewees classroom practice gathered in 2010 and 2011. Revealed are teachers' strategies for addressing policy imperatives. This study focuses primarily on teaching in Bhutan and it also presents emerging findings from interview and survey data gathered in 2015 from a study of 120 class ten middle secondary students' experiences with teachers' pedagogic strategies.

Main description of research

Over the past decade, there has been a surge of literature that recognizes the affordances for learning that ‘local wisdom’ offers to modern school curricula (e.g. Aikenhead, 2001; Ares, 2007; Gutiérrez & Rogoff, 2003; Jungck & Kajorsin, 2005, Lauer, 2009, Le Grange 2007, McGovern, 1999, 2000, Sarangapani, 2003; Semali & Stambach, 1997; Shizha, 2007; Thaman, 1993). Culturally based pedagogic approaches are acknowledged for their relevance toward helping students generate connections between ideas in school texts and locally constructed knowledges (Ares, 2007). Enabling learners to understand and assess different knowledges in relation to concepts learned in schools may also facilitate new information becoming part of a learners’ long-term memory (Le Grange, 2012). Attaining a degree of literacy or fluency both in the ‘texts’ of state education and those considered traditional enables learners to move with dexterity between the communities in which particular knowledges and worldviews are part (Aikenhead, 2001; Gutiérrez & Rogoff, 2003). Further, the ability to draw on different reservoirs of knowledge allows teachers and learners to ‘choose the one that better fulfils their goals at any given moment’ (Aikenhead, 2001: 350).

Volumes have been compiled that demonstrate the value of traditional epistemologies, particularly in communities where ways of life and ways of knowing are largely traditional. Bates and Nakashima (2009: 6) point out that ‘acquiring indigenous knowledge of how to navigate and survive on the land, and how to use local resources to feed, clothe and provide for one’s family, may be of much greater
relevance for the contexts in which many indigenous groups continue to live today’. The ‘wisdom of the past’ may hold equal (or greater) utility than the modern knowledges taught in schools.

Nevertheless, even when a foundation is arranged to support the inclusion of traditional knowledges and worldviews into the school setting, achieving a balance within a curriculum may be tenuous. Localized school materials and methods may remain predominantly embedded with Western ideas and images, potentially giving rise to tensions for teachers and students who have alternative explanations and views of the world. One might also speculate that a curriculum too heavily saturated with traditional content may hinder students from engaging in ways of living that are changing owing to modernisation and global connectivity. For example, a ‘too traditional’ curriculum may leave students insufficiently prepared to make a smooth transition into a modern jobs market (e.g. white-collar work) or tertiary education. Attempts to bring different knowledges into a national curriculum may be further complicated in countries with diverse ethnic, linguistic, and culturally and geographically isolated minority populations; ideas about what tradition means may be varied, uncodified and preclude formalised teachable concepts (Bates & Nakashima, 2009). Underpinning this study is the question of whether or not it is possible for a modern curriculum to embody traditional knowledges and ways of understanding the world and ameliorate extant tensions.

At the time of data collection, Bhutan's national system of education was undergoing reforms to align the curriculum more closely with the imperative of the development philosophy of Gross National Happiness (GNH), aiming to conserve the country’s traditional knowledges and cultural heritage while continuing to steer the curriculum toward international standards and include ‘the best in modern knowledge and technological developments from abroad’ (Education Sector Review Commission, 2008: 12). Highly visible in education policy text and everyday discourse were fervent attempts to balance change and the continuity of tradition.

This research queries the role of the teacher as a mediator and focuses on how teachers, as front-line agents, manage the tensions and contradictions based on their own understanding of the modern and the traditional. It also probes how students understand the different knowledge flows that come together in state education and the affordances, if any, for learning offered by culturally relevant teaching strategies. To this end, in-depth interviews were conducted with fifty-one class 10 teachers at six different middle secondary schools and a sample of seven teachers were observed. This study reveals the pedagogic strategies employed by teachers – i.e. accommodating, inviting discussion, subordinating, and dismissing – as a means to address discontinuities between different knowledges. In addition, a preliminary analysis of data assessing students' perspectives on whether or not pedagogies that accommodate different forms of knowledge offer affordances for learning will be presented. This data was gathered during fieldwork at a middle secondary school in Gasa, Bhutan in 2015.

References


