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English Language as Social Capital: A Study of Online English Private Tutoring in Taiwan

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Abstract: *The worldwide expansion of globalization contributes to the dominant status of the English language and furthers the expansion of linguistic imperialism. Underpinned by the concept of globalization, this study situates in the context of online English private tutoring (EPT) and aims to explore the image of the English language and examine what it reflects in society and education. Data were collected from learners' testimonials presented on the website of one famous online EPT company based in Taiwan. Content Analysis was adopted to analyse learners' stated learning goals in their testimonials. The findings indicate the English language is understood as a form of social capital, allowing access to better career development, higher education and the realization of dreams. Implications of the English language as social capital in society, education and the global were discussed.*

Keywords*: online EPT; social capital; globalization; shadow education; Taiwan*

Introduction

The end of colonization does not bring an end to the powerful English language, but English has still been a dominant and powerful language worldwide. The expansion of globalization leads to increased constant contact between people from all over the world and contributes to the significant position of English as a global/international language which facilitates communication between people from different linguistic backgrounds. The spread of globalization makes learning the English language become a prevalent phenomenon worldwide.

The rapid spread of English has been argued by scholars to contribute to the expansion of linguistic imperialism (Phillipson, 1988), which may devalue indigenous languages and cultures (Phillipson, 1992) by privileging certain groups of people who are proficient in English or have much access to English language learning (Pennycook, 1995). English is regarded as a gatekeeper for people to be part of certain groups and benefit from them. English as a dominant/global language worldwide leads to unbalanced power relations between English languages and other languages (Pennycook, 1998). This unbalanced power relations between the English language and other languages are shown in the rapid growth and worldwide expansion of the English language teaching industry, especially in the English private tutoring market.

Learners of English, both native and non-native, subscribe to English private tutoring to learn English with the intention to meet their needs. Due to the fee-charging nature, English private tutoring has been argued to create an edu-business (Ball, 2012) industry in which English as a commodity can be sold or bought. English as a product, from the economic perspective, shows the way how the English language is connected to and part of the material world. Notably, it also unveils that English is regarded as a capital that individuals can own, accumulate and benefit from it (Dandy & Pua, 2014).

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ISSN 2232-1802 doi: 10.14425/jice.2022.11.2.1230

According to Bourdieu, social capital refers to “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu, 1986, p.248-249). Thinking with Bourdieu, the phenomenon of learning English can be seen as the institution acts which allow individuals to obtain membership in a network of relationships. Instead of benefitting from the network, members also bring benefits to the communities. Following this line, the influence the English language has (i.e. the discourses of globalization, linguistic imperialism etc.) contributes to its powerful and dominant status.

Language may be regarded as a mode, a form, a concrete reality of relations between people in society (Clark, 2006). The image of the English language not only reflects the relations between English and other languages but also between the English language and society. This study situates in the context of online English private tutoring and data were drawn from English learners’ testimonials and profiles presented on one popular English private tutoring company based in Taiwan. Underpinned by the concepts of globalization and social capital, this paper aims to explore the image of the English language and examine what it reflects in society and education by analysing English learners’ stated learning goals.

Theoretical Framework

The widespread of the English language in the world is considered an incidental result of colonial expansion and globalization (Spolsky, 2004). The spread of English further makes English become the dominant and powerful language in many domains, such as technology, economy, politics, society, education and so on. The dominant and powerful status of the English language implies linguistic hierarchization which favours the English language over other languages. On the one hand, this has been a positive thing in many parts of the world; on the other hand, it has been argued to lead to the development of linguistic imperialism proposed by Phillipson (1992).

Linguistic imperialism is defined by Phillipson that “the dominance of English is asserted and maintained by the establishment and continuous reconstitution of structural and cultural inequalities between English and other languages. Here structural refers broadly to material properties (for example, institutions, financial allocation) and cultural to immaterial or ideological properties (for example, attitudes, pedagogical principles)” (Phillipson, 1992, p. 47). Linguistic imperialism first took place through colonisation and military powers (Knowles, 1998). Through the colonial era, colonisers impose their language and power, which makes their language more dominant, privileged, and powerful than the indigenous languages. The end of the colonial era does not end the prestige of the colonisers’ languages; rather, they remain the same status in the government and education system in the colonial countries. For example, English enjoyed high prestige as the chief official language for the government, laws, education and international business in Hong Kong during the British colonial era. After the end of British colonization in Hong Kong, English remains a ladder to success and a gatekeeper to higher education, better jobs and social positions (Lai, 2021). That is to say, English is linked with prestigious jobs, socio-economic positions and higher education. This results in individuals’ belief that a high level of proficiency in English would open up a brighter future and benefit those who are proficient in English. Here it reveals that English is understood as a form of capital, allowing access to economic, social and higher education opportunities.

The phenomenon of the English language as capital is not limited to colonial areas only, but it expands into other areas of the world. For example, Lin (2012) points out that in Taiwan thinks the “mastery of English is considered important for accumulating personal capital and English is regarded as a socio-cultural asset” (p. 70). Globalization can be seen as one of the significant factors leading to this expansion. Globalization leads to increased constant contact between people from all over the world and reinforces the significant position of English as a global/international language which facilitates communication between people from different linguistic backgrounds. English is perceived and used as a language for individuals to be able to be connected to/get involved in global tasks. The prestige English enjoys leads to the inequalities between English and other languages (Lai, 2021) and the imbalanced continued allocation of more resources to English than to other languages.

In response to the global/international status of the English language, many countries have had reformation on English language education policy and developed strategies of internationalisation (Haigh, 2002; Yang, 2002). The changes and reformations in English language education policy to meet the challenges of globalization make the English language powerful, allowing access to economic and social opportunities such as jobs, services, and connections (Park, 2011). This reflects that the English language is understood as a form of capital and this indicates how the phenomenon of globalization contributes to the development of the English language as a capital.

To cope with the challenges of globalization, at the micro level, individuals subscribe to English private tutoring to obtain good English ability. Private tutoring is also well-known as shadow education as it mimics mainstream education and changes as it does (Bray, 2013). However, research indicates that private tutoring is in a process of growing out of the shadow and transforming from mimicking mainstream education to providing solutions to educational issues (Zhang & Bray, 2020). For example, Chang (2019) suggests that one type (franchised Children American English *Buxiban*) of English *buxiban* (*Buxiban* is a term used to refer to private tutoring in Taiwan*)* in Taiwan is growing beyond the shadow of mainstream education by developing its curriculum, teacher training program, assessment system and teaching materials for English learners to be able to connect the self to the world and meet the challenges of globalization. The research not only suggests English private tutoring's transformation but also unveils the impact of globalization on this transformation.

The expansion of globalization furthers the spread of English and reinforces the prestige of English as a global/international language (Shahid, 2021). The dominant status of English affects not only mainstream English education but also the English private tutoring industry. English private tutoring plays a significant role in English language learning as many English learners, both native and non-native English speakers, subscribe to English private tutoring to learn English. Because private tutoring has become a worldwide phenomenon (Mori & Baker, 2010), research on the impact of globalization on English private tutoring can provide us with in-depth insights into the relationship between globalization and English language learning/teaching.

English Private Tutoring

Private tutoring, also known as shadow education, is regarded as activities which aims to improve students' academic performance in mainstream education (GyÖri, 2020). The three aspects of private tutoring are (1) tutoring in academic school subjects, (2) additional provision besides mainstream schooling, and (3) the intention of financial gain (Bray, 2013). Private tutoring can be delivered in different forms, such as one-on-one, small-group, or lecture-type. Due to its fee-charging nature, it is regarded as an edu-business industry and it has been argued to reproduce social classes, leading to inequality and social stratification (Tsiplakides, 2018).

The metaphor 'shadow' is used to indicate shadow education is a type of education which is closely connected to mainstream education. As aforementioned, Bray (2013) claims that shadow education mimics mainstream education and changes its shape as mainstream education does. Except for the impact of mainstream education, shadow education operates like an assemblage in which society, culture, education, and business are entangled and interact with each other (Chang, 2019). In other words, this type of education is not simply connected to and affected by mainstream education, but it is regarded as part of the whole dynamic ecosystem of education and society. As societies and states become more competitive, partly due to globalization, school systems also become more sophisticated and flexible that in turn expands the demand for tutoring (Bray, 2013).

With regard to English private tutoring, as discussed earlier, the expansion of globalization makes the dominant and global status of the English language in communication systems become more visible and contributes to the rapid and highly-demand for English language teaching. In response to the challenges caused by globalization, Taiwan has undergone a major transformation in its education system by reforming English educational policy and curriculum to equip its citizens with the English skills to get involved in/connected to the world. Private tutoring is part of the ecosystem of education broadly, so the transformation happening in mainstream education reflects in English private tutoring. Given the impact of globalization, a certain type of *buxiban* in Taiwan is in the process of growing out of the shadow of mainstream education by providing English courses which aim to equip learners with the English skills to allow them to connect the self to the world (Chang, 2019).

Compared to research conducted to explore the impact of globalization on mainstream education, little has been known in the field of English private tutoring. As English private tutoring plays a significant role in English language learning, discussion related to what is happening in English private tutoring will provide us with a more comprehensive understating of the impact of globalization on English language teaching in the world.

English in Taiwan

In Taiwan, the privileged, powerful and dominating position of English is a complicated phenomenon in which politics (Lu, 2011), economics (Brown, 2015), and educational system (Chen & Johnson, 2004; Lu, 2011; White, 2013), culture and society (Lin, 2012) and personal achievement (Jonathan, 2013) entangle and interact with each other (see Chang 2019, p.451). Additionally, English is the only foreign language that is included in the formal educational curriculum, tested in the entrance examinations and further plays a role of a gatekeeper in receiving higher education and a key to better careers and higher social status (Jonathan, 2013). Lin (2012) pointed out that people in Taiwan think the "mastery of English is considered important for accumulating personal capital and English is regarded as a socio-cultural asset" (p. 70). The spread of globalization contributes to the status of English as an international/global language and further makes learning English become a 'national campaign' in Taiwan (Tsou,2013). This is also known as 'English fever'.

Learning English in Taiwan has long been a compulsory part of the curriculum in secondary and tertiary education. In order to improve individuals' capacity to meet the challenges emerging with globalization, English language learning and teaching in Taiwan has undergone a major transformation in the last two decades. The Taiwanese government has announced a series of educational reforms in the evaluation and curriculum system. In the year of 2001, the Ministry of Education (MOE) announced that English education is now included in the curriculum in primary education from Grade 3 to Grade 6. In 2014, English listening is included as a formal and compulsory part of the Comprehensive Assessment Program for Junior High School Students. For higher education, English listening has been an optional part of the College Entrance Examination since 2013 and it becomes compulsory in 2015. Furthermore, according to the 12-year curriculum guidelines, the goal of English education in Taiwan intends to balance the development of the four skills (listening, speaking, reading and writing), enhance students' communication skills in English and cultivate students' other abilities (such as critical thinking, analysing ability, creative ability) by adopting a student-centred teaching approach (Chang 2019, pp. 451-452; 461). Except for the changes (i.e. including listening in the Entrance Examination) in the evaluation system, in 2021, the Taiwanese government launched the Bilingual 2030 policy which intends to boost the competitiveness of Taiwan's young generation, build on the advantage as a Mandarin-speaking nation, further strengthen English communication skills of the citizens and help bolster their global competitiveness (National Development Council, 2022).

However, although English listening is included in the entrance examinations, the evaluation system still mainly focuses on grammar, reading comprehension, vocabulary and writing. The scores of entrance examinations are used for senior high school or university admission. In order to prepare students for these significant entrance examinations, the curricular standards at school education are well known to focus on grammar-translation, with accuracy emphasized over fluency, by building students' knowledge of English grammatical structures, which further results in the marginalization of listening and speaking instruction (Chen & Tsai 2012, as cited in Chang 2019, p. 452). That is, the teaching method (teacher-centred, grammar translation) and teaching focus (e.g. test-driven) of formal schools do not correspond to the 12-year curriculum guidelines.

Since schools cannot provide enough training on English listening and speaking for students to cope with the new educational reformation, most of the students and their parents seek help from private tutoring which offers courses to balance the development of English four skills, speaking, listening, reading and writing (Chang 2019, p. 452). Given the high demand for English private tutoring, a 60-billion-dollar English private tutoring market per year is created (Chi, 2017) and a variety of *buxiban*s, such as Win-Lee *buxiban*, (franchised) Children American English *buxiban*, online English private tutoring, one-on-one English tutoring etc., are established to meet the market demand and learners' needs. Again, this shows that the expansion of English private tutoring is affected by changes in mainstream education. Notably, this indicates that English private tutoring does not mimic mainstream education only but it functions to complement what is missing in mainstream education.

Methodology

This study is situated in the context of online English private tutoring and data were drawn from English learners' testimonials and profiles presented on one popular English private tutoring company based in Taiwan. This online EPT company offers one-on-one private tutoring courses via its platform. Learners register to obtain the membership and create an account which allows them to select courses, tutors and dates/times to learn English. Tutors are categorised into three groups, English native speakers tutors from the inner circle (i.e. UK, USA, Australia etc.), non-native English speakers tutors from the outer circle (i.e. Philippines) and Taiwanese bilingual tutors. The tuition fees vary based on the tutors that learners select. Courses instructed by tutors from the inner circle cost more than those by tutors from the outer and expanding circle.

In the testimonials, learners indicated their name, occupation, and gender and included a photo of themselves along with sharing their reasons for participating in online EPT, learning goals, their experiences with tutors/the online EPT company, their prior English learning experiences and opinions about mainstream education. Notably, using testimonials as a data source is not unproblematic as testimonials are a common type of marketing strategy utilized on supplier websites (Davis, 2013), acting as customer endorsements of a product to attract prospective customers. Hence, it is likely that testimonials with more positive customer experiences will be presented on supplier websites, which raises issues of data credibility, such as assuring the testimonials project accurate information and correspond to reality. However, this study aimed to explore learners' learning goals for participating in online EPT. Hence, their testimonials on their learning goals were less likely to act as customer endorsement and could be seen as reliable and useful data reflecting real-life learners' learning goals for participating in online EPT. Similar studies which adopted testimonials as data could be found in Briant, Doherty, Dooley and English's (2020) paper. In their paper, they used 160 parent testimonials posted on the websites of 16 private tutoring suppliers in Australia. They then argue that parent testimonials use emotional appeals to construct private tutoring as a resolution to parents' fateful moments (Briant, Doherty, Dooley, & English, 2020). Fateful moments refer to "dilemmas that are perceived by the individual as 'high consequence' "according to Giddens (1991, p. 131).

Data for this study were collected from June to October of 2021 and 176 learners' testimonials and profiles were collected for analysis. One of the challenges in collecting data from a website is that saves of the webpages as HTML files using a web browser "tend not to preserve the way advertisements, images, animations, and page layout were rendered at the time the webpage was saved" (Djonov & Knox, 2014, p.172). Due to the 'instantly impermanent' (Perlmutter, 2003) characteristic of webpages, all the testimonials were screen-captured and saved as PDF files for analysis. With regard to ethical clearance, I did not consider it necessary to seek consent from the participants because the information on their testimonials was publicly open to everyone without any requirement for access to it (see Chang 2019, p.454). The testimonials were written in Mandarin (N=175) or English (N=1). Data were analysed in Mandarin and then translated into English by the researcher who is bilingual in English and Mandarin. To ensure the credibility of the translation, back-translation (Tyupa, 2011) was adopted. The translated text was re-translated back into Mandarin by two research assistants who did not see the original text. In order to keep anonymity, the participants were marked as participants 1, 2, 3 etc. followed by their occupation.

Content analysis can be understood as a research method for the interpretation of the content of texts through a systematic classification process of coding and identifying themes or patterns (Hsieh & Shannon, 2005). Text data may be in visual or auditory forms and might have been obtained from narrative responses, open-ended survey questions, interviews, focus groups, observations, or print media such as articles, books, or manuals (Kondracki, Wellman & Amundson, 2002). In this study, content analysis was adopted to analyse 135 responses from 176 participants' testimonials with the intention to construct themes of English learners' learning goals, which then reflected the image of the English language. Notably, the number of responses did not correspond to the number of participants because some of them did not share their learning goals.

I adopted the manifest analysis approach to coding the data. The manifest analysis allows researchers to examine the data systematically and quantitatively by counting what is observable and tangible. It focuses on what is said by the participants and allows the researcher to stay very close to the text, use the words themselves and describe the visible and obvious in the text (Berg, 2001). Applying manifest analysis, I generated 20 codes which were then categorized into 12 sub-themes and 4 themes (refer to Appendix A). Codes including the terms 'work', 'job' and 'colleagues' were categorised into the theme 'learning English for work' which consisted of four sub-themes, namely learning English for work communication, learning English for more/better work opportunities, learning English for returning to work, and English is significant at work. Codes with the terms, such as 'study abroad' or 'university', were merged into the theme 'learning English for having access to higher education'. Codes, such as 'English language intuition, 'good English ability', 'English becomes part of life' and 'have the ability to think/speak in English', constructed the theme 'learning English as a second language'. The theme 'learning English to improve personal non-work related English communication skills' included three sub-themes (1) improve English speaking, (2) improve English listening and (3) communication for travelling.

Findings

I applied Content Analysis to analyse learners' stated learning goals presented in their testimonials. Twenty codes were generated and then merged into 4 themes. They were (1) learning English for work, (2) learning English for having access to higher education, (3) learning English as a second language, and (4) learning English for improving personal non-work related English communication skills.

Learning English for Work

In the dataset, 21 out of the 135 responses indicated that English learners subscribed to online EPT for work purposes. One response pointed out English is significant for work (Example 1) and 5 out of 21 responses stated they learned English in order to have access to more and better work opportunities as examples presented below:

1. When I started working, I noticed the significance of English at work. (participant 20, employed individual)
2. Without English ability as a tool, less work opportunities. (participant 25, employed individual)
3. Good English speaking ability is necessary for better work opportunities (Participant 122)

Additionally, 8 responses suggested that they learned to improve their English communication skills because they needed to use English to communicate with foreigners at work (i.e. clients, colleagues, people from different countries). Examples are presented below:

4. I need to improve my speaking and listening skills because I need to have meetings with foreign clients and colleagues. (participant 32, employed individual)
5. I need to use a lot of English at work because I need to communicate with foreign engineers. (participant 93, employed individual)
6. In my position at work, I need to communicate with people from different countries, so I need to overcome a variety of English accents. (participant 96, engineer)

Using English as a medium for making effective communication with people from different countries unveils the global, international and dominant status of English language (Shahid, 2021).

Learning English for Having Access to Higher Education

The powerful and dominating status of the English language is also shown in higher education. In Taiwan, English is the only compulsory foreign language subject that is tested in the university entrance examination.

7. English is significant in either university or future. (participant 54, student)

The example above shows how the English language plays a significant role in higher education and the future in Taiwan. In the dataset, participants further indicated how the English language plays the role of a gatekeeper to higher education.

8. I participate in online English tutoring because I am going to sit an IELTS test and I am very nervous in speaking English. (participant 171, student)
9. I want to study abroad, so I need to pass IELTS or TOEFL. (participant 3, student)

Examples 8 and 9 indicate individuals need to pass certain international English language tests to obtain admission to overseas universities. Example 9 further shows the English language is understood as a tool for individuals to realize their dreams and then enhance personal development. Participants' perception of English as a gatekeeper to higher education and a tool for realizing personal dreams reflects their attitudes toward the English language and the image English presents: English is more powerful and dominant than other languages. This reflects the dominance of the English language over other languages (i.e. Example 7) and shows the impact of linguistic imperialism on the ideological property (for example, attitudes, and pedagogical principles) (Phillipson, 1992) between English and other languages. Furthermore, the examples above indicate that English is conceptualized as a form of capital that individuals can own to achieve their goals (i.e. access to higher education, realization of dreams or better/brighter future).

Learning English as a Second Language

In this dataset, participants pointed out that they wished to have good English ability as example 10 shows below:

10. I always want to have good English ability (participant 127, student)

Additionally, two responses in this study indicated English learners' desire to have English as part of their life. They stated the desire to have the ability to speak/think in English or maintain good English language intuition. Examples are presented below:

11. Force myself to speak and think in English and make it become a habit (participant 28, employed individual).
12. I want to cultivate the ability to think in English (participant 40, employed individual)
13. Cultivate English language intuition to have good English ability (participant 71, student)
14. I wish English can become part of my life (participant 151, student)

Examples 10 to 14 reflect not only English learners' awareness of the significance of English but also their desire to master English. Their wish to make English become part of daily life or become a habit points out learners' desire to master the English language and use it as a second language in daily life. The desire to learn English as a second language reflects the privileged, powerful and dominant position of the English language and shows the English language is understood as a form of communication in daily life in Taiwanese society. Furthermore, the dominant and significant status of the English language is shown in the Taiwanese government's Bilingual 2030 policy which aims to adopt English as a second official language in Taiwan. The plan to adopt the English language as a second language discloses the dominance of the English language over other languages and unveils the impact of linguistic imperialism.

Learning English for Improving Personal Non-Work-Related English Communication Skills

Learners' desire to improve their non-work related English communication skills shows that English is understood and used as a form of daily communication. In the dataset, 105 out of 134 responses highlighted the desire to improve English non-work-related communication skills. The examples below illustrate that learners desire to improve their English proficiency to be able to make communication with others from different linguistic backgrounds and use English confidently in daily life and in travelling.

15. When traveling abroad, I felt very frustrated because I even couldn't speak a sentence correctly to foreigners. Suddenly, I was aware of the usefulness and necessity of English. In order to have a smooth trip next time, I decided to subscribe to this one-on-one online EPT course. (participant 140, employed individual)
16. My (English) speaking ability is relatively poor. I wish to improve my communicative ability to talk to foreigners. (participant 46, student)
17. (When I went) travelling in Australia, I found my listening skill was poor when (I needed to) communicate with others. (participant 67, employed individual)

Notably, for non-work- related English communication skills, learners highlighted their strong desire to master speaking (N= 82) and listening (N= 17) skills. Additionally, 6 out of 135 responses indicated that English speaking and/or listening training in mainstream education was limited or even ignored, which resulted in their struggling in speaking the language.

18. In my prior English learning experience at school, English teaching focused on listening and reading skill. I seldom had chances to practice speaking English in a class of 30 to 40 students. (participant 49, student)
19. Looking back at my English learning experiences in mainstream education, it is full of frustration because the focus of teaching is on passing entrance examinations, such as grammar, reading, vocabulary and phrases. There is almost no chance to practice speaking. (participant 94, student)

20. What I have learned at school can't let me communicate with foreigners properly. (participant 146, student)

In the examples above, learners indicate the lack of speaking practices in mainstream education. This unveils online English private tutoring as providing the services which are lacking in the formal education sector. Furthermore, 4 responses stated they participate in online EPT to practice English speaking and listening because the training provided in certain types of English private tutoring is also limited.

21. Having attended American English *buxiban* for many years, I am still afraid of speaking English. So I want to try this online EPT course to overcome my fear of speaking English. (participant 125, student)
22. I attended English *buxiban* for better academic performance. However, when I encountered foreigners and needed to use English, I even can't speak a full sentence. (participant 143, student)
23. Win-Lee *buxiban* lacks one-on-one English speaking opportunities.
(Participant 21, student)
24. I have attended franchised American English *buxiban* for many years, I still do not know how to speak English and also feel afraid when I need to speak English. (participant 85, student)

The finding that learners used online EPT to complement the educational issues in both mainstream education and private tutoring is noteworthy and significant in the field of English private tutoring. It revealed private tutoring is in the process of transforming, from mimicking mainstream education into solutions to educational issues happening in mainstream education (Chang, 2019) and other types of English private tutoring.

It is notable to point out that learners indicated one of the reasons for improving personal English communication is to be able to communicate with foreigners effectively and successfully. The word 'foreign' and 'foreigners' occurred 22 times. Learners' desire to be able to communicate effectively with foreigners can be interpreted as their desire to be involved in/connected to the world. The desire to be able to talk to or chat with foreigners via English discloses Taiwanese English learners' perception of English as a global language and reflects the dominant status of English in the world.

Discussion

The findings of this study indicate the dominant, powerful and influential status of the English language in education, society and personal development. Furthermore, the English language is regarded as social capital, allowing individuals to benefit from the influential network of the English language. Given its wide use in many domains across the world, learning English has become a pervasive phenomenon and the number of English learners shows a visible increase all over the world (Yung & Chiu, 2020). This makes not only the size of the network of connections individuals can effectively mobilize but also the volume of the network expands dramatically. The development of globalization can be seen as one of the factors contributing to the expansion of the network of the English language as English is intimately tied up with globalization (Pennycook 2009, p.113).

Globalization is not limited to economic processes only. Kumaravadivelu (2008) sees globalization as new "interconnections and flows among nations, economies and peoples" (p. 32). Participants in this study indicate their desire to learn English for better communication with people from different linguistic backgrounds at work or when travelling. The desire to establish interconnection with people by means of the English language reveals the significance of the English language, then motivates individuals to learn English and helps contribute to more efficient production of English language teaching. The increasing demand for English language learning is shown in both national and private educational sectors. As mentioned earlier, English language learning and teaching in Taiwan has undergone a major transformation in order to meet the challenges of globalization. The launch of the Bilingual 2030 policy is evidence to show the dominant and influential status of the English language in mainstream education.

Research on Taiwanese learners' language attitudes towards English language, Mandarin, and Southern-Min (a local language spoken in Taiwan) indicates that English is evaluated most positively and the users of English are evaluated most positively in the higher social status (Liu, 2018). It further points out that the English language received much attention from both the government and individuals is perceived as privileged because of its seemingly 'pragmatic' function (i.e. access to education, career promotion etc.) in Taiwanese society. The participants of this study also highlight the significance of the English language in the domains of education and career development. Though the Bilingual 2030 policy aims to strengthen citizens' English proficiency without devaluing the official language (Mandarin), I argue that the Bilingual 2030 policy has the potential to devalue other local languages from the perspective of learners' language attitudes. The employment of the Bilingual 2030 policy may have a negative impact on other local languages. Issues related to it demand the policymakers' attention.

In order to meet the challenges of globalization, mastery of English is regarded as a necessity to obtain membership in the network. That is, the perception of the English language as social capital is reinforced by the expansion of globalization. The desire to master English is shown in the dataset where participants desire to learn English as a second language by using/thinking in English in daily life. In order to have good English ability and make English become part of life, individuals seek support and assistance from English private tutoring, which creates a 60-billion-dollar English private tutoring market in Taiwan (Chi, 2017). Hence, I argue that English as social capital driven by globalization can be seen as a significant factor contributing to the visible growth of English private tutoring. In line with this, as the network of English language learning expands, the industry of English private tutoring grows, too. More significantly, learners further state that they seek support/assistance from English private tutoring to have better English ability because the listening and speaking training in mainstream education is limited or even neglected. This finding unveils online English private tutoring is regarded as a solution to educational issues existing in mainstream education. Moreover, this transformation discloses the close relationship between mainstream education and reflects private tutoring's part of the whole dynamic ecosystem of education.

For Bourdieu, capital is power and his empirical descriptions of social capital focus on its role in the creation of a class society. English as social capital creates a group, of English elites, that favour individuals who are proficient in English and have access to a better career and higher education. This is shown in the dataset where learners point out that good English ability leads to better career development and English is significant in higher education. The spread of English also contributes to significant social inequalities (Pennycook, 2009). The production of the English elites group may lead to the production of a social class (Agyekum, 2018) in which individuals with good English proficiency are privileged and powerful.

Moreover, the findings reveal that learners pay for attending online EPT to obtain better English ability, allowing them to have membership in this group. This points out that English private tutoring plays a significant role in English language learning except for mainstream education. Notably, due to the fee-charging nature of English private tutoring, people from higher social class backgrounds are able to afford or invest more in EPT to obtain a higher level of English proficiency than others. This may result in the reproduction of social classes as individuals from higher social classes may be more likely to obtain membership of the 'English elites' group and have access to a better career, higher education and social classes.

Conclusion

Kumaravadivelu (2008) suggest that globalization results in the transformation of contemporary social life in all its economic, political, cultural, technological, ecological, and individual dimensions (p. 32). This study demonstrates the expansion of globalization reinforces the perception of English as social capital and helps contribute to a growing industry of English language teaching/learning in both national and private educational sectors. The findings indicate the penetration of the power of the English language into education and society. I argue this penetration to be another expansion of linguistic imperialism (Phillipson, 1992) on both material properties (i.e. Bilingual 2030 policy) and ideological properties (i.e. learners' attitudes toward the English language).

Pennycook (2009) suggests that "it is evident not only that English is widely used across the globe but also that it is part of those processes we call globalization. What this means for English, other languages and cultures, and processes of global change, however, is much harder to determine" (p. 113). The findings of this study indicate the potential negative impact of the spread of the English language on other local languages in the expansion of globalization. Further research on this area conducted in different contexts will provide a comprehensive understanding of this phenomenon.

Although this study situates in the context of Taiwan, the impact is not limited to Taiwan, but it can be prevalent around the world given the easy access to online courses. The findings of this study add to the literature on both English private tutoring and online EPT from L2 learners' perspective. The limitation of this study is the data source. This study analysed Taiwanese English learners' testimonials posted on the online EPT's website. Although learners share their learning experiences and stated learning goals in the testimonials, there is no room for the researcher to dig into what is presented in the testimonials. For future research, I suggest a one-on-one or focus-group interview with participants allow researchers to have in-depth insights into the data.

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Appendix A: Codes and Generated Themes

	Themes	Sub-Themes	Codes	Examples
1.	learning English for work	Work communication	work communication	I want to improve English communication skills at work.
				At work, I need to communicate with clients from different countries.
			greet foreigners at work	I need to greet foreigners at work.
			meeting colleagues	I have meetings with foreign colleagues.
			use English at work	I found I can't use English properly at work.
		learning English for more/ better work opportunities	Work/job opportunities	With good English ability, there are better work opportunities.
				I want to have more work opportunities.
		learning English for returning to work	return to work	I plan to return to work and believe good English ability is important at work.
		English is significant at work		English is always significant at work.
2.	learning English for having access to higher education	study abroad	study abroad	I would like to prepare international English language examinations for studying abroad.
				I subscribe to online EPT because I want to study abroad.
		higher education	university	English is very important in either university or future.
3.	learning English for improving personal non-work related English communication skills	improve English speaking	speaking	I want to improve my English speaking skill.
			talk to foreigners	I hope I am able to talk to foreigners
			conversation	I want to have more opportunities to practice English conversation.
			speak English	I am afraid of speaking English.
			pronunciation	I would like to improve pronunciation.
		improve English listening	listening	My listening is not very good. I want to improve my listening skill.
		communication for traveling	traveling	I love to travel and need to use English as an international language for communication
				I participate in online EPT to learn English because I would like to have a smooth traveling.

	Themes	Sub-Themes	Codes	Examples
4.	learning English as a second language	good English ability	good English ability	I always want to have good English ability.
		English language intuition	English language intuition	I want to cultivate English language intuition.
				Force myself to speak and think in English.
				I want to cultivate my ability to think in English.
		English becomes part of life	part of life	I wish English can become part of my life.
			become a habit	Force myself to speak and think in English and make it become a habit.
			use English in life.	I want to improve general English skills and use English in life.

Toward Student-Centered Teacher Education Programs

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Abstract: *The impetus for this conceptual article was the authors' reflections on their experiences as teachers and teacher educators in various Asian countries (China, Indonesia, Malaysia, Japan, Philippines, Singapore, and Vietnam), combined with their support for Social-Cognitive Theory and student-centered learning. Of course, great variations exist within and between countries in terms of development programs for educators. The present article examines actions by lecturers, policy makers, and other stakeholders which might enhance teacher education by helping it evolve to be more student-centered, thereby better preparing teachers to be lifelong learners and for those teachers to use a student-centered approach with their own students. These actions involve five possible areas: (1) students doing more research; (2) increasing learners' roles in course design; (3) going beyond basic teaching skills and the basic curriculum; (4) building the social side of learning; and (5) searching for new knowledge and learning tools.*

Keywords: *teacher education, Social-Cognitive Theory, student-centered, adult learning, course design*

Introduction

Textbooks for teacher education programs, as well as academic articles about teacher education, have long called for teachers to use student-centered methods with their students (Felder & Brent, 1996; Kaput, 2018). Student-centered education fits with modern theories of learning, such as Social-Cognitive Theory (Bandura, 1977), and cognate theories. These theories posit that people learn by constructing their own knowledge and skills in conjunction with the other people in their surroundings. This view contrasts with teacher-centered education which flows from Behaviorist Theory, a view that sees the central drivers of learning being teachers and materials developers, with students being the recipients, not the constructors.

The authors of the current article have a total of 35 and 28 years respectively as teachers and teacher educators in the Asia-Pacific, not to mention their years as students in teacher education programs. This experience suggests that the difficulties in implementing student-centered approaches described by Felder and Brent more than 25 years ago remain very much present. The focus of this article lies in changing teacher education programs in ways that facilitate a more successful shift toward student-centeredness. This can be done by changing how the programs are taught and, as a result of that, how the teachers in these programs teach their own students. None of the ideas presented here are new ideas; the hope is that policy makers will lend their weight to implement them.

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ISSN 2232-1802 doi: 10.14425/jice.2022.11.2.1205

Participants in teacher education programs are often in-service teachers attempting to enhance their professional development. They bring their years of teaching practice, experiences, and insights into their teacher education courses and, given this background, are capable of enlightening their classmates as well as their lecturers. The knowledge that course participants bring to their programs constitutes one reason that the most appropriate approach to teaching teachers is student-centered. Another reason is that teachers who experience student-centered instruction may be more likely to use student-centered approaches in their own teaching (Keiler, 2018). Unfortunately, many lecturers in teacher education programs, despite what their slides, videos, and lecture notes say in favor of student-centered education, tend to position themselves as "sage on stages" and neglect the course participants' experiences, needs, and preferences. Based on the authors' reflections on their experiences teaching in teacher education, this article aims to highlight areas where a student-centered approach may be applied.

To enhance relevancy for the teacher participants, courses in teacher education can be transformed to be more student-centered on the following areas: (1) students doing research, (2) students playing roles in course design, (3) going beyond basic teaching skills and content, (4) enhancing the social dimension of learning, and (5) participating in the search for new knowledge and new learning tools. Each of the five areas will be addressed below. Of course, none of this underestimates the difficulties faced by both teachers and teacher educators.

Students Doing Research

Conducting research as well as being an educated consumer of research conducted by others fits well with Social-Cognitive Theory, because conducting research with others provides teachers a structured, social path to constructing their own knowledge relevant to education. Research should be included in teacher education, because it plays an important role in debates about how teaching is done, with many books and institutions claiming that their teaching is "research-based" (Puustinen et al., 2018). Unfortunately, too many teachers feel that conducting research, even reading research conducted by others, is beyond them. However, research need not involve complicated statistics, and articles that report research need not be thick with jargon.

Various forms of teacher-doable research can be conducted as part of teacher education programs. These forms of research include Action Research (Schmuck, 2008) and Lesson Study (Soto Gómez et al., 2019). Even more doable are observation tasks and reflection tasks, which can increase teachers' confidence and skill in understanding for themselves what happens as students try to learn. Lecturers can make research seem less impenetrable by scaffolding the reading of research reports. This scaffolding can involve learning the parts of reports of various types of research (Creswell & Plano Clark, 2011), briefly seeing how citations and references work, and learning the use of various free online research databases, such as Google Scholar, ERIC, and ResearchGate. It may also be useful to read articles on disagreements about how to teach and failures of reform efforts, e.g., Creamer (2018) and Rahman and Pandian (2018). Such reading will take teachers beyond the fairytale world of happy endings too often presented in undergraduate textbooks on education.

Roles in Course Design

Most people in teacher education programs are at least 18 years old, with many being much older. Knowles et al. (2011) identified certain characteristics of adult learners. These include a preference for playing a role in designing their own learning. Another term for this is self-directed learning, i.e., autonomy. People in teacher education programs should be empowered to draw on their life experiences and to apply or reject knowledge introduced in the program. Social-Cognitive Theory, in contrast with Behaviorism, seeks to promote intrinsic motivation which is very much in line with student-centeredness, e.g., encouraging students to design their own programs and collaborate to conduct research rather than being dependent on the research of others.

Vella (2002, p. 4) listed 12 principles for effective adult learning. These principles included: 1. needs assessment (participation of the learners in deciding what is to be learned); 2. praxis (action with reflection); 3. respect for learners as decision makers; 4. teamwork and use of small groups; 5. engagement of learners in what they are learning; 6. accountability (how do they know they know?). Even pre-service teachers come with 12 or more years of experiences in formal education and are usually keen on applying the newly acquired lessons from their teacher education courses to real situations. They also expect to be involved in the planning of their teacher education studies. This involvement in designing their course will promote motivation and autonomy.

The next part of this section on teacher education students' role in course design discusses three ideas that flow from Social-Cognitive Theory. These ideas hold the promise of increasing student involvement in course design, in the hope that such involvement boosts students' feeling of ownership, promotes greater engagement, models student-centered learning, makes the class better suited and more useful to students, and teaches new ideas and perspectives to lecturers. These three overlapping ideas are to: (a) negotiate the syllabus with education students; (b) involve students in co-teaching; and (c) include peer- and self-assessment.

Negotiated Syllabus

Negotiated syllabus means that, rather than lecturers informing students what and how they will be learning, students have some input into these matters. Negotiated syllabus offers students in teacher education programs an entry point into syllabus design (Gómez & Cortés-Jaramillo, 2019). It provides scaffolding with the hope that these students will go on to play increasingly larger roles in cooperating with their own teachers and classmates to plan their lessons and, later, to give their own students, regardless of their ages, choice in negotiating their own learning. Most teachers have spent many years in teacher-centered instructional contexts; therefore, much scaffolding may be needed along their transition to learning and teaching in a student-centered mode.

Normally, lecturers prepare a course syllabus prior to the beginning of the course and then present and explain it to students. In contrast, a negotiated syllabus invites students to participate in syllabus construction by dialoging with lecturers. Supporting Knowles et al. (2011) and Vella (2002), Shaari, Ismail, and Hamzah's study (2017) found that the practice of dialogue in classes of young adults is in line with the principles for effective adult learning, particularly respecting learners' autonomy as decision makers. What aspects are negotiated in a negotiated syllabus and how much room for change exists depends in part on university guidelines, student interest (rather than wanting to leave everything to lecturers' wishes), and the degree to which lecturers are flexible. Negotiation can be finished early in the term or can be an ongoing process.

Negotiating serves as a teaching device, because as lecturers negotiate with students, each side can learn from the other. For example, lecturers may not be fully aware of constraints students face, such as lack of reliable internet connection or part-time job commitments. Furthermore, some students may have other constraints, such as physical disabilities. Negotiating can promote learning when lecturers explain the theories, research, etc. that underlie their syllabus suggestions. For instance, discussions later in this article that explain guidelines for assignments used in the authors' courses delve into some of this point.

Exercising a negotiated syllabus may face organizational constraints, as some program administrators require lecturers to submit a completed syllabus weeks before the semester begins. In some instances, a syllabus in the making with some blank slots or tentative plans may be viewed as lack of readiness on the part of the lecturer. A fixed syllabus is thus seen like a cheque written by the lecturer to be delivered and fulfilled in a rigid way. However, an ongoing negotiated syllabus does not mean failing to meet accountability standards; instead, it can mean teachers walking their talk about student-centered instruction. That said, negotiating a syllabus with students may also mean negotiating the concept of syllabus negotiation with program administrators. Policy makers can have a role here in promoting principled flexibility.

Co-Teaching

Co-Teaching means that students do some of the teaching of their teacher education courses. This arrangement provides another way to put students front-and-center in the design of their courses as they witness student-centered instruction being modeled for them (Burns & Mitzberg, 2019). Additionally, involving learners in lesson planning and teaching can have other benefits, including the fact that students may have better understandings of what their peers know and do not know (Ghrear et al., 2021; Pinker, 2014). Pinker called this the "curse of knowledge," i.e., the way people's own knowledge, such as lecturers' knowledge, causes difficulty in understanding what others, such as students, might or might not know. Thus, peers may occasionally outperform teachers in facilitating knowledge construction. Furthermore, engagement via co-teaching promotes learning, as teaching often leads to intense involvement by those students teaching their peers. In other words, as Seneca (cited in Chau & Jacobs, 2021) is believed to have stated about 2000 years ago, "Those who teach learn twice."

Table 1 presents a set of guidelines used by one of the authors of this article for co-teaching. Obviously, the larger the class, the shorter the teaching time for each student, but teaching can also be done online.

Table 1. Guidelines for Students Doing Co-Teaching with the Lecturer

Guidelines for Co-Teaching
<u>Background</u>: You have 2.5 hours for the lesson you are co-teaching with the course lecturer, inclusive of a 10-minute biobreak. Please reserve the final 20 minutes of the 2.5 hrs for you, with help from classmates and the lecturer, to critique your lesson in relation to the guidelines presented below. <u>Objectives</u> At the beginning of the lesson, please identify one relevant and measurable objective of your lesson and explain why it is relevant and how it will be measured, and then measure the objective during the session and report whether the objective was achieved. <u>General Guidelines</u> 1. The level of content fits with the level of your course, e.g., what is taught with first-year university students and with doctoral/master level students will overlap, but there may be differences, including: a. Discuss practical difficulties and complexities. For example, with Extensive Reading, difficulties and complexities might include how to convince students to do extensive reading, how to find appropriate reading materials (especially in languages other than English), how to gain parental support, working with administrators and government bodies, and whether teachers will feel unimportant when students are doing silent reading in class. b. Trust classmates to learn independently, e.g., assign classmates a video to watch before class or give them questions to consider before class. A system is put in place to nudge classmates to do this pre-class work, e.g., forming pairs who encourage each other. c. Ask a question to which you do not know the answer and brainstorm answers with classmates. For instance, you can do some Socratic Questioning (Paul & Elder, 2019). This fits with the idea that teachers/lecturers are not "sages on stages" who know all the answers. An example of such a question on the topic of with Extensive Reading might be: Is it better for students to read and listen to a text simultaneously or should they read the text at one time and listen to it at another time?

Table 1. Guidelines for Students Doing Co-Teaching with the Lecturer (continued)

	d.	Use questions/tasks to challenge students to go beyond the information given, rather than only repeating what you have been taught.
2.	Make connections to previous sessions in the course and theories in those sessions, as well as to other theories. Explore the different perspectives of various theories. For example, what can Humanistic Theory and Social Interdependence Theory each contribute to how to do Extensive Reading?	
3.	Explore the impact of society on your topic, e.g., what various segments of society promote and discourage Extensive Reading, and could this be changed?	
4.	Explore the impact of understanding or implementing your topic on your society, e.g., in what ways can your knowledge of the topic be used to contribute to the society?	
5.	Try something in your teaching you have never done before or seen done before, e.g., use a different software, a different form of formative assessment, a different technique for promoting student-student interaction, or something you have yet to try to foster higher order thinking.	
6.	Keep to the time limit.	
7.	Prior to the class you are co-teaching, please consult with the lecturer at least twice, in person or online. Please come prepared to these sessions, rather than depending too much on the lecturer.	

Source: Authors

The guidelines have been reported to be useful by graduate students who are used to teaching and thus, the opportunity of co-teaching allows them to make the most of their prior experiences as teachers into their graduate class. Examples of student-centered methods from Table 1, with the guidelines for co-teaching, include:

(1) In the section on Objectives, to make the task more doable, only one objective needs to be stated, but the attainment of that objective should be measured in some way, perhaps using a subjective measure, e.g., asking what people feel or believe. Consistent with Point 1d, later in Table 1, the task should involve higher order thinking, e.g., coursemates need to analyze and evaluate content examined in the lesson, not merely recall it (Bruner, 1964; Ozdem-Yilmaz & Bilican, 2020).

(2) Point 1b in Table 1 encourages course members to try a Flipped Classroom approach (Umam et al., 2019) and asks them to consider what they might do to increase the probability that their course mates will do the pre-class reading and thinking. This is a matter that the teachers studying in teacher education programs are likely to grapple with when teaching their own students.

(3) Point 1c calls on the co-teachers to ask a question to which they themselves are not sure of the answer. The purpose here is to reinforce the concept from the student-centered paradigm (Jacobs & Farrell, 2001) that teachers are not all-knowing and, in fact, teachers need to learn from and along with students.

(4) Point 2 urges co-teachers to make connections between the session they are doing and previous or future sessions. One way of doing this involves linking theories. These can be different theories or different applications of the same theory, as well as clashing theories. Too many courses tend toward a silo effect in which each lesson involves a separate topic (Stolz, 2021), and

once that topic is covered, it is forgotten until, perhaps, the final exam or the comprehensive exam.

(5) Points 3 and 4 call for a different sort of connection, connection between society and the formal education system, e.g., what is the impact on the use of cooperative learning (a.k.a., collaborative learning) when elements in the wider society emphasize the benefits of competition (Attle & Baker, 2007). Examining such connections provides one way to encourage "big picture" perspectives among students. Furthermore, education needs to raise the awareness that students are part of the society and to connect students with others in and out of school. Read Jacobs and Crookes (2022) for language teachers' personal accounts of "community-engaged education," including Lie (2022).

Despite the possible advantages of students doing co-teaching, as with many other elements of student-centered learning, co-teaching can be seen as a strategy used by less motivated teachers who want students to do the work that their teachers are being paid to do. Here, policy makers can play a role in clearing a path for student-centered changes by encouraging co-teaching in teacher education programs.

Assessment

So far, this section has looked at how students in teacher education programs can engage in social construction of their learning with classmates and teachers by negotiating their syllabus and co-teaching. Of course, learning cannot be complete without assessment, and students can also negotiate their own assessment. Furthermore, student-centered assessment includes peer- and self-assessment, as well as students assessing teachers, course materials, and the food and beverages made available to students and staff (as to whether they are tasty, reasonably-priced, healthy, and environmentally friendly). Assessment from such a 360-degree perspective attempts to accomplish assessment of all the players in the education ecosystem (Dagal & Zembat, 2017). For example, lecturers are assessed by the main people with whom they interact: administrators, fellow lecturers, and students. Involving students in this kind of broad assessment means that they are involved not only in peer feedback and self-feedback but also in assessment of materials, lecturers, and the institution where they are studying. This puts more responsibility on students' shoulders, thereby preparing them to be lifelong learners and contributors to the lifelong learning of others. Knowledgeable assessment requires understanding of how the parts of education systems function. When students expand their understanding of these parts, their ability to design their learning increases. Policy makers can play a role here by being transparent about their goals and the constraints they face.

Peer assessment in any education course is important for at least three reasons. One, too often, the only ones viewing and learning from student work are their teachers/lecturers. Peer assessment activities enlarge the readership of students' papers and thus provide a greater sense of purpose for the creators. Two, the art and science of providing and responding to feedback is important for everyone in education to learn as part of the pathway to ongoing progress. Three, peer interaction plays a key role in lifelong learning. Table 2 shows guidelines for an assignment in a graduate course in education in which students are to write and also to provide peer feedback. (This particular assignment may not be appropriate for all classes. An alternative would be for students to dialogue about a topic discussed on the course.) The peer feedback aspect of the task is explained near the bottom of the table.

Table 2. Guidelines for Dialogue Entries

Guidelines for Dialogue Entries

Instructions:
Choose an article from an academic journal. The article should report primary research of any type: qualitative, quantitative, or mixed methods. The article should be relevant to a topic we have already discussed in class. Please refer to this webpage when selecting a journal in which to find an article:

Write a dialogue entry related to the article and the topic.

GUIDELINES

Your Entry

1. The academic journal chosen for the activity must be peer-reviewed.
2. The article chosen for the activity must be approved by the lecturer prior to the writing of the dialogue entry.
3. The tone of the dialogue entry may be conversational and informal, or it can be formal.
4. Provide the APA-style reference for the article you chose.
5. Reflect on why you chose the article, how the topic is relevant to your context, and how you could utilize ideas from the article in your teaching/learning context.
6. Highlight at least two features you liked in the article.
7. What is one controversial point relevant to the topic of the article?
8. What is one theory relevant to the article?
9. If you did a similar study in a context in which you learn/teach, would the result probably be similar? Why or why not?
10. Make sure that the entry would be comprehensible to people sitting next to you on a bus, i.e., explain any education jargon, please.
11. Your dialogue entry must have 1000 to 1500 words (plus or minus 10%).
12. Include four APA-style references, in addition to the reference for the article you read.
13. Any penalty for late submission will be decided on a case-to-case basis.
14. Email your dialogue entry to the lecturer and your classmates.

Feedback on a Colleague's Entry

15. Each student must give 180-word (plus or minus 10%) feedback on one entry by a classmate. Everyone should receive feedback on their entry from one of their classmates. To facilitate this, please email everyone to let us know to whose entry you will be giving feedback.
16. This feedback should contain at least one elaborated, i.e., explained, point of praise and one elaborated question. To facilitate this elaboration, the feedback should contain at least one reference written in APA style. The reference is not included in the 180 words.
17. The feedback should be submitted by email to the lecturer and all your classmates no more than five days after the dialogue entry was received. Before you write your feedback, please inform us whose dialogue entry you chose.

Source: Authors

A few points deserve mention regarding the peer feedback in this assignment. All of these points link with the concept highlighted elsewhere in this paper of using Social-Cognitive Theory to encourage student-centered lifelong learning. First, students are asked to give positive peer feedback and to ask a question. The emphasis on the positive aims to urge educators to use more positive than negative feedback with students, peers, and others in their lives, in the hope that positive feedback can promote a more supportive atmosphere (Miers, 2021; Seligman, 2011). Second, questions have the benefit of potentially keeping alive the interaction among the students and animating the use of questions in the spirit of Socratic Questioning and Higher Order Thinking (Paul & Elder, 2019). Third, "elaboration" is a key concept, as too often in students' dialogue entries and in their feedback on peer's entries, it seems that the level of thought exhibited is of the "off the top of my head" and the "superficial pleasantries" variety.

For certain kinds of assignments, a shared rubric or checklist would help the self- and peer-assessment so that students can use the same points of reference. The assessment instrument, too, can be designed together with the students and negotiated to be more meaningful and relevant. Again, the use of peer- and self-assessment can be seen, not as a valuable learning strategy but, as a strategy for teachers to reduce their workloads. Policy makers can provide invaluable support for this and other student-centered strategies.

Beyond Basic Teaching and the Basic Content

Mastering basic teaching skills is essential for any teacher. However, in the experience of the authors of this article, too many teacher learners in our teacher education courses, even those with many years' experience and strong teaching skills, while they are highly skilled in teacher-centered instruction, lack an equivalent level of skill in student-centered teaching methods: (1) they speak the large majority of the available class time; (2) almost all interaction is teacher-student with little or no student-student interaction; and (3) they leave out formative assessment, devoting time only to summative, high-stakes assessment (Tien et al., 2020).

Education courses can address some of these shortcomings. Lecturers can model student-centered methods and involve course members in using such methods themselves, as was done in the co-teaching described in Table 1 or in students reflecting on their use of student-centered methods when doing their Dialogue Entrees (Table 2). For instance, one way to encourage efficient time management during co-teaching is to appoint a session chair. The job of the chair includes introducing the presentation topic and speakers, keeping the time, recording the presentation, and managing the flow of questions and answers. This resembles what a session chair often does at education conferences. In teacher-centered instruction, teachers play all these roles.

At the same time that teachers need basic skills in student-centered classroom instruction, teacher education should also help teachers go beyond the basic curriculum by linking with issues outside the classroom, e.g., the United Nations' Sustainable Development Goals (SDGs) (Leal Filho et al., 2019), which include addressing poverty (Lie, 2022) and climate change (Cates, 2022). Educators are facilitators in their classrooms and can be facilitators beyond classrooms as well, e.g., by educating the students in their classes, as well as the general public, about how their diets impact their own health, the health of nonhuman animals, the health of the environment, and the lives of those living in poverty (Chau et al., 2022).

Such curriculum links fit with Dewey's (1926) view that education consists of more than preparing students for the careers they will enter after they have finished their schooling. Dewey advocated that by showing students how their education plays a present-day role in improving society, what happens at all levels of the education system can become more engaging for students. However, new teachers may be focused exclusively on teaching their designated subject area, e.g., Indonesian language, in a narrow sense, and often teaching materials reinforce this silo view (Trust et al., 2017). As part of the "social" in Social-Cognitive Theory, teacher education programs need to help teachers – and, in turn, their students – appreciate the role their learning plays in society as a whole. Policy makers can support the breaking down and silos, as educators move toward more integrated curricula.

Maley (2017), in a book about integrating the SDGs in language education, argued that a narrow "I only teach the basics of my subject" view of teaching is "cheating" students and the whole of society. Instead, a broader view is needed, a view in which students learn and teachers teach not so that individuals can rise higher in society, above others, but so that people generally can rise together. Maley's (2017) perspective is reflected in the following poem of his from his previously cited edited book on teaching language via the SDGs:

Teacher

What do you do?

I'm a teacher.

What do you teach?

People.

What do you teach them?

English.

You mean grammar, verbs, nouns, pronunciation, conjugation, articles and particles, negatives and interrogatives …?

That too.

What do you mean, 'that too'?

Well, I also try to teach them how to think, and feel – show them inspiration, aspiration, cooperation, participation, consolation, innovation, … help them think about globalization, exploitation, confrontation, incarceration, discrimination, degradation, subjugation, …how inequality brings poverty, how intolerance brings violence, how need is denied by greed, how –isms become prisons, how thinking and feeling can bring about healing.

Well I don't know about that. Maybe you should stick to language, forget about anguish. You can't change the world.

But if I did that, I'd be a cheater, not a teacher.

Building the Social Side of Learning

The word *social* has become increasingly common in the understanding and practice of learning, including formal learning as part of preschool, primary, secondary, and tertiary institutions, as well as informal and nonformal learning. As in Social-Cognitive Theory, Vygotsky (1980), in Socio-Cultural Theory, highlighted how learning begins on the social plane before being internalized. Along with the increased prominence of *social*, another sign of the times, i.e., zeitgeist, term is *community*, as people collaborate to learn and act. Terms such as Communities of Practice (Wenger, 1998) and Communities of Inquiry (Castellanos-Reyes, 2020; Garrison, Anderson, & Archer, 1999) signal people coming together to learn and to apply their learning. The Community of Inquiry (CoI) model was proposed by Garrison et al. (1999) to offer a shared experience to intensify students' higher-order thinking skills through their harmonized roles of individuals and society.

Communities of Inquiry are created when three domains reinforce one another optimally. The first domain is Cognitive Presence, referring to the degree of students' capability to construct understanding and interpret meanings (Swan et al., 2008). To enhance Cognitive Presence, students are empowered to think critically as well as learn autonomously through the second domain, Teacher Presence, which requires teachers to perform collaborate with students to design, select, and provide meaningful collaborative learning activities for learners, to be a model for students as to how to lead, guide, and employ effective strategies to deliver instructional content (Garrison, et al., 2001). The third CoI domain, Social Presence, covers students' emotional state towards the learning interactions with classmates or teachers around intellectual activities and tasks (Swan et al., 2008).

The CoI model is apparent in many professional communities. These communities have senior and novice members, as do similar organizations in education, including teachers' unions, as well as local, national, and international associations, such as teachers who teach particular learners, e.g., Indonesia Association of Teachers of English as a Foreign Language and teachers who wish to explore and promote a particular methodology, e.g., Extensive Reading Foundation.

At the same time, virtual organizations of educators also exist, e.g., both the authors of this article belong to Teachers Voices, a Facebook group with over 10,000 teachers of second/foreign languages. Additionally, many teachers have formed their own social media groups, e.g., a Whatsapp group of mathematics teachers at a particular school. Both authors have also invited their students to join online professional organizations and co-present in the conferences organized by these organizations. Collaborative projects between lecturers and students enable students to be more autonomous learners and thus their Cognitive Presence to construct knowledge is optimized. When students can think and learn autonomously, they, too, along with their lecturers, are able to perform the roles within the Teacher Presence. Within this learning partnership, the Social Presence naturally expands and integrates with the Cognitive Presence and Teacher Presence to enhance the learning experiences.

Students in teacher education programs today are fortunate to have so many ways to utilize the power of the social during their time as students, as well as throughout their careers as educators. However, to maximize the value of the above opportunities, students need guidance as to the existence of the opportunities and how best to utilize them. For example, one benefit of the pandemic has been that many universities and other organizations have put on free webinars, and the authors of this article have informed their students and colleagues whenever news of such events reached their networks.

At a graduate school of education where both authors have taught, students in every cohort need to organize a workshop for teachers and other educators as part of a mandatory project. Thanks to the internet, this workshop is open free of charge internationally. Students form a committee to invite a keynote speaker and offer workshop sessions usually delivered by some of the students themselves. The workshops serve as opportunities for professional development and networking for the students, as well as for participants. Other examples of encouraging students to look out for opportunities for social learning have occurred when both authors have invited students to co-author articles and presentations. Such situations provide a type of apprenticeship opportunity for the students.

Sharing Knowledge and Tools

As the saying goes, "The only constant is change." For example, change is constant in the knowledge base of what people in education should know, i.e., content, and know how to do, i.e., skills. The authors of this article were graduate students in education when the paradigm was shifting from one based on Behaviorism and the Audio-Lingual Method of language teaching to one based on Social-Cognitive Theory and Communicative Language Teaching. Teachers early in the authors' careers needed to know how to straddle both approaches. They needed to know how to construct and conduct Audio-Lingual substitution drills, as well as how to ask and help students answer higher order thinking questions, such as "Can you please explain your answer," as in Social-Cognitive Theory. For conducting secondary research, in the 1980s and 1990s students in teacher education programs needed to know how to search in the bound volumes of the library, and for conducting primary research, they needed to know how to make the cards that were fed into computers to run MANOVA and other statistical tests.

Times have changed! Lecturers in teacher education programs now have a responsibility to guide their students as to modern ways to read as well as conduct and publish research. This is not to mention, lecturers learning from students. Below are some examples from the authors' experiences.

The first example, from 2022, combines learning new tools, as well as learning new content. This was communicated by one of the article's authors to teacher learners via the following email.

Table 3. Sharing Knowledge and Tools

Many ways exist to learn topics relevant to education. Podcasts are one way. An example is the podcast "A Slight Change of Plans" hosted by Maya Shankar, a cognitive scientist. The guest on one episode was Angela Duckworth (2013), a former mathematics and science teacher and now a Psychology professor, as well as author of *Grit: The Power of Passion and Perseverance*, a book everyone in education should know about even if they disagree with the book's main idea: in education and elsewhere in life, talent and other advantages are less important than effort and dedication. TED Talks offer another way to learn, and Professor Duckworth's talk on GRIT has 26 million views. TED Talks often have subtitles, including translated subtitles.

Conclusion

As with any conceptual paper, this article has the limitation that it lacks direct backing within the paper from double-blind, placebo-controlled research or a rigorously conducted qualitative study. Nonetheless, perhaps conceptual papers do have a place in the ecosystem of literature aimed at providing policy makers with ideas for improving the state of understanding and practice in education. Such papers attempt to bring together the thoughts collected by the authors based on their observations from teaching various students in various contexts, their reading of theory and research, their discussions with policy makers, colleagues, and students, and their hopes for the future. This article has contributed no new ideas; instead, it has asked and tried to answer the question of what can be done so that the very good, long-accepted ideas of Social-Cognitive Theory and student-centered learning are not as widely implemented as they might be.

Based on these thoughts, this article has highlighted important characteristics of courses in education focusing on student-centered learning and related theories including Social-Cognitive Theory. We hope that the article can spark reflection and debate about what already works well and how to improve the education experience of educators regardless of the level of the program in which they study and teach, as well as whether that education takes place at a tertiary institution, at the place where the educators teach (such as peer mentoring in primary schools by senior teachers), in non-formal or informal settings, or in some combination of all of them. Therefore, we welcome discussion and disagreement.

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The Role of Malaysian Higher Education in IR 4.0

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Abstract: *Defining the 4th Industrial Revolution (IR4.0) as the "digital revolution" which combines human and technological capabilities in industry, this paper poses two questions. First, what is the country's level of attainment of IR4.0 Second, in preparing the population to take advantage of IR4.0, what is the role of higher education and what challenges does this sector face in pursuit of this goal? In Malaysia, the government has rosy projections of IR4.0 adoption, but on-the-ground surveys do not concur. The answer to the second question lies in the preparedness of this sector in meeting the challenges of migration to IR4.0. And in terms of IR4.0 training, competency deficiencies existed among many higher education instructors. With industry still lagging behind IR4.0 adoption, teaching IR4.0 skills is still necessary.*

Keywords: *IP4.0, digital revolution, emerging technologies, TVET, pedagogy*

Introduction

The advance of Industrial Revolution 4.0 (IR4.0) suggests either its inevitability or that its overwhelming advantages would persuade the industry to embrace this new technology. Its benefits are indeed many. With new technology – artificial intelligence, automation, mobile supercomputing, and self-drive cars, for example - come new solutions to global challenges and new avenues for employment as yet unknown (Brown-Martin, 2018). But seldom are its costs highlighted. These include the social disruptions that the adoption of technology brings. These include magnifying the divides between the haves (with the Internet) and the have-nots (without), the polarization of jobs leading likewise to greater inequality, greater capital intensity, and skilled labour shortages, all contributing to greater welfare vulnerability for some less endowed population groups (Sony 2020, p. 260).

But what precisely is IR4.0? The Industrial Revolution began with the invention of steam-powered engines and hydraulic power for the mechanisation of manufacturing in the late 18th century. A second Industrial Revolution was said to occur in the early 20th century with the arrival of electric power, which became the driver of both mass production in industry and at home. The third Industrial Revolution was associated with the emergence of ICT for automation in industry, programmable logic controllers (PLCs) and the development of personal computers, these developments began in the 1970s. The beginning 2000s saw the beginning of the 4th Industrial Revolution (IR4.0) also referred to as the "digital revolution" which combines human and technological capabilities in industry, including cloud computing, beginning with the most technologically advanced countries.

IR4.0's onset prompts each country aspiring to use it to ask itself two questions. First, what is the country's level of attainment of IR4.0? Second, how far short is the country's attainment of IR4.0 that its education system, in whatever form, must bridge? Nested in this broad question are several equally important questions. What does education for IR4.0 entail? What challenges does this sector face in pursuit of this goal? Are there subsectors of education that are particularly suited

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ISSN 2232-1802 doi: 10.14425/jice.2022.11.2.0913

for nurturing IR4.0 upskilling? To the extent that the country has not reached the level of being IR4.0 compliant, is it necessary for education to go all the way to catch up?

These two questions are what this exploratory paper attempts to answer. We pose these questions in the case of Malaysia, a high-middle-income country poised to advance to developed country status in 2020, according to then Prime Minister Mahathir's *Wawasan (Vision) 2020* blueprint, but on account of the country's slower growth since the 1997-98 Asian Financial Crisis, was pushed back to the year 2030 by Prime Minister Najib Razak. *Wawasan 2020* was a vision advanced by Prime Minister Mahathir Mohammad during the tabling of the Sixth Malaysia Plan in 1991. The vision called for Malaysia to advance to the status of a self-sufficient industrial nation by the year 2020 (Mahathir, 1991). Even with this lengthened schedule, doubts have been expressed as to whether this timetable is achievable, given challenges like deindustrialisation (Rasiah, 1995, 2011; Lee, 2022) and money politics (Gomez et al, 2021, Thillainathan & Cheong, 2019) the country has to confront. To achieve its goal of sustained growth, mastering IR4.0 to leverage the latest technology is essential. How far is Malaysian industry from the technological frontier?

Malaysia in the IR4.0 Era

To ascertain the readiness of Malaysia's economy and the world of work for the onset of IR4.0 despite the many announcements of its readiness is the first question to be answered.

Malaysia's Preparedness for IR4.0

International comparisons of preparedness for IR4.0 places Malaysia well up the ladder of IR4.0 achievement. In the World Economic Forum's *Readiness for the Future of Production Report 2018*, readiness is defined as the share of manufacturing value-added and the potential in expanding these shares in the future. The situation is reflected in the structure of production (complexity and scale of operations) and carefully selected production drivers (7 of them). These attributes are estimated for each country and aggregated to country rankings. In addition, they form the basis for classifying them into several archetypes in terms of future production. These archetypes are conveniently classified as (a) leading, countries with strong production bases today that also display a high readiness for the future; (b) legacy, countries with also strong production base but also at risk for the future; (c) high-potential, countries with limited production base, but with the potential to increase future production. And finally, (d) nascent, countries with limited production base today and also exhibiting a poor readiness for the future (WEF 2018, p. 9).

Of the 100 countries surveyed, only 25 are classified as "leading", most of them in North America, Europe and East Asia. The rest consists of 10 Legacy countries, 7 High Potential countries, and the bulk, 58 countries, Nascent.

Table 1 shows selected countries classified according to the criteria defined above. By these definitions, Malaysia has done very well.

Table 1. Readiness for Future Production, Selected Countries

Archtypical Country	Name	Structure of Production		Drivers of Production	
		Score	Rank	Score	Rank
Leading	China	8.25	5	6.14	25
Leading	Germany	8.69	3	7.50	6
Leading	Japan	9.99	1	6.82	16
Leading	Korea	8.85	2	6.51	21
Leading	Malaysia	6.81	20	6.51	22
Leading	Singapore	7.28	11	7.96	2

Table 1. Readiness for Future Production, Selected Countries (continued)

Archtypical Country	Name	Structure of Production		Drivers of Production	
		Score	Rank	Score	Rank
Leading	United K	7.78	13	7.84	4
Leading	US	7.78	7	8.16	1
Legacy	India	5.99	30	5.24	44
Legacy	Russia	5.71	34	5.35	43
Legacy	Thailand	7.13	12	5.45	35
Hi-potential	Australia	4.26	61	7.15	12
Hi-potential	Hong Kong	4.52	58	7.45	8
Hi-potentiak	Norway	5.65	36	7.07	13
Nascent	Argentina	4.91	50	4.25	75
Nascent	Pakistan	3.82	74	3.60	93

Source: WEF (2018, p. 12)

Using this methodology, Malaysia has acquitted itself quite well, it being in the group of "leading countries" with a strong production base and with drivers that show a strong readiness for the future, and with an aggregate score that ranks the country 20th among 100 countries in 2018 (WEF 2018, p. 12). Among ASEAN countries, only Singapore ranks (well) above it.

Is Malaysia's achievement of being qualified to be included among leading countries preparing their countries for production in the future by adopting IR4.0? Is it because of the government's leading role in promoting IR4.0? There is no question of the government's recent promotion of IR4.0; In 2021, no fewer than 3 documents referenced policies or activities related to IR4.0. In February 2021, the government released *Malaysia Digital Economy Blueprint* (MDEB) (EPU, 2021a). The MDEB was intended to support other initiatives of the Government to … transform Malaysia into a digitally-driven, high-income nation and a regional leader in digital economy." (EPU 2021a, p. 10). Phase 1 (2021 to 2022) aims to accelerate the adoption of the digital foundation needed for Phase 2 (2023-2025) which aims to drive digital transformation, and Phase 3 (2026-2030) which builds strong, sustainable growth in the decades to come, positioning Malaysia to become a regional market producer for digital products and digital solutions provider (EPU 2021a, p. 12). The digital economy is of course a part of IR4.0.

In July 2021, the Malaysian government announced through its *National Fourth Industrial Revolution (4IR) Policy* (EPU, 2021b) its policy on IR4.0, a "broad overarching national policy that drives … the adoption of emerging technologies … and builds the foundation to drive digitalisation across the nation, including bridging the digital gap." (EPU 2021b, p. 27). Confidence in achieving its targets was based on Malaysia's readiness to embrace technology through a plethora of plans like the National Policy on Science, Technology and Innovation 2013-2020, National Education Blueprint 2013-2025, National Internet of Things (IoT) Strategic Roadmap 2015-2025, Eleventh Malaysia Plan 2016-2020 with strategy to expand modern services, Malaysia Productivity Blueprint. And Malaysia's "above average ranking in key technology and innovation related global indices … (which) has provided a strong foundation for the nation to seize growth opportunities and mitigate risks arising from the 4IR." (EPU 2021b, p. 33). Grandiose achievements are promised despite Malaysia's admitted decline in competitiveness as shown by global competitiveness indices.

In September 2021, the Malaysian government released the Twelve Malaysia Plan 2021-2025. Though not targeted specifically at IR4.0, it made ample references to it, beginning with accelerating technology adoption and innovation as a "policy enabler". In giving ample coverage to IR4.0 and the digital economy, the Plan is explicit on the challenges it faced, including low investment in R&D, low commercialization and experimental research, and shortage of Science, Technology, Engineering and Mathematics (STEM) graduates. The declining trend in Malaysia's competitiveness and product innovation have also been noted (EPU, 2021c).

Table 2. Malaysia's Drivers of Future Production 2018

	Score	Rank
Structures of Production	*6.81*	*20*
Complexity	6.80	30
Scale	6.82	7
Future Production Drivers	*6.51*	*22*
Technology & Innovation	5.85	23
Human Capital	6.52	21
Global Trade & Investment	7.39	7
Institutional Framework	6.56	30
Sustainable Resources	5.98	60
Demand Environment	6.32	17

Sources: WEF (2018, tables B1-B8)

However, these optimistic pronouncements were not matched by a closer analysis of the factors that make up the future of production (Table 2). Of the factors that made up the structure of production, the country's score is boosted by "scale", the proportion of manufacturing in total output. Manufacturing has not diversified to become more complex, which would be in keeping with industrial deepening. Malaysia's dependence on extractive or agricultural production for its exports has also hurt its economy in times of stress (Narang, 2020).

More telling are the scores for drivers of future production. Scores for "technology and innovation", "human capital" and "sustainable resources" were particularly weak, the first two factors signifying the widely known fact that Malaysia, using a low-skilled/semi-skilled imported labour model to keep wages low to compete with other low-cost countries like Indonesia and Vietnam. To this story is added Malaysia being locked into low-technology production with Malaysian employers reluctant to take on new technology that might require the hiring of anything beyond low-skill workers but which would propel Malaysia up the technology ladder and hence towards high-income. As a result, the same manufacturing establishments produce the same narrow range of products, only more of them, the only exception being with the arrival of international supply chains. Evidence of this labour intensity is seen in Malaysia having only 34 industrial manufacturing robots for 10,000 employees, below the Asian average, China, long the symbol of labour intensity, has twice as many robots, while leaders Singapore and Korea, with 488 and 631 robots are way ahead. As a consequence, Tan (2021) quoted Bank Negara noting that "This results in foreign multinationals relocating lower value-added processes to Malaysia, while moving higher productivity and value-added processes to neighbouring economies such as Singapore and PR China. In the end, this self-reinforcing image further locks Malaysia into this low-cost bind that would take significant resources to undo".

Besides these drivers, the "institutional framework" is wanting. Malaysia's institutional weaknesses received extensive coverage, especially from Gomez (1994), Narayan (1996), and Rasiah (1995). More recently, critical work has come from Tan (2007), Gomez (2017) and Thillainathan and Cheong (2019), all of which point to rent-seeking by vested interests, whether public or private, or both collaboratively. The result is development funds siphoned off to benefit vested interests.

Apart from these revelations, there is the phenomenon of what is labelled "negative deindustrialisation" – the premature move to services even before the industrialization process has run its full course (Rasiah, 1995, 2011). In this process, the move away from manufacturing began well before the manufacturing sector reached maturity, and investor funds lured away by the promise of high returns from real estate construction projects.

Given these challenges confronting the economy, what has been observed on the ground? Although piecemeal, the picture that emerged is mixed – major deficiencies are reported as frequently as stories of successful implementation. In a reported interview on July 28, 2017 (Mibrand, 2017), the Chief Executive Officer of the Human Resources Development Board (HRDF), Vinaeswaran Jeyandran was of the view that despite the hype, Malaysia is not yet in IR4.0. Just over 30% of Malaysia's 15 million workforce have been equipped to handle IR4.0 processes. HRDF is attempting to increase the proportion to 35-40%. *Techwire Asia* reports an even lower adoption among Malaysian Small Medium Enterprises (SMEs) of 10 to 15% taking steps to adopt IR4.0 processes with the reasons cited being the lack of structure and collaboration between the private and public sectors in driving the country's IR4.0 agenda (Tech Wire Asia, 2019). The same article reported that only about 90 of the approximately 500,000 Malaysian SMEs were eligible for funding under the national blueprint. Uncertainty as to how to access government funds to migrate to IR4.0 proved to be an additional hurdle. A separate study found fault with Malaysian Company research innovations which focused on unlocking value in new businesses rather than revitalising their core businesses (Techwire Asia, 2019).

No more optimistic was Kaur (2019a) who concluded that Malaysia was falling behind in IR4.0 adoption. *TM One* (2019) concurred. "In general, Malaysia is still struggling to adopt IR4.0, and many businesses are stuck at Industry 3.0, in terms of manufacturing technology… many manufacturers still rely on low-cost labour, i.e., foreign workers, and are hesitant to invest in innovative automation technologies." Among other manufacturers, those that adopted IR4.0 were no fully cognisant of its impact while those that had not adopted did not understand what it was for (Lee et al, 2019).

And surveys of members of civil society offer no more clarity. Idris' (2019) survey of 400 public university students found a majority who had heard of IR4.0 (90%), had some (understanding of IR4.0 (70%), recognized the importance of education funding to upgrade IR4.0 knowledge and skills (75%), were aware of the advantages of IR4.0 in terms of lowering production cost (65%), reduced manual work (65%), increased income (50%) insufficient (55%) and that there was insufficient supporting infrastructure (60%). The opposite results came from another survey of students of a private university (Chalil, 2019). The survey of 550 student respondents found students (and parents) lacked clarity about and felt unprepared to join an IR4.0-capable workforce. They also felt that higher education was not doing enough. More than 50% of the students were unable to articulate the substance of IR4.0, while more than 50% of the parents were unable to discuss IR4.0. Respondents felt that universities stressed theoretical and academic teaching, and did not expose students to IR4.0. Critical thinking, problem-solving, and leadership have not been adequately addressed.

Another survey conducted by Market Research Malaysia of more than 200 companies focusing on manufacturing, logistics and healthcare. It was found that the overall average score for current readiness for IR4.0 to be no higher than 2.65 out of a maximum of 5, and for future readiness to be only still 3.11. Manufacturing seems to expect a moderately high impact of IR4.0, with 45% expecting IR4.0 likely to hit their business. Out of the technologies, only cloud computing, big data and the Internet of Things stand out and these are in the logistics and healthcare sectors (Market Research Malaysia, 2019).

Beyond issues on the ground, Malaysia encounters structural advantages as well as challenges. Sharifah (2020) notes a lack of confidence among Malaysians in using the various types of e-wallets, worried about how secure these e-wallets are. She also noted technical issues related to the use of the Internet – the average connection speed in Malaysia being 13.3 megabits per second, compared with Thailand's 17.06 megabits per second and Singapore's 60.39 megabits per second. Internet stability and accessibility are also still issues in Malaysia. In addition, Yong et. al. (2020) identified the many challenges – long payback period, high cost of adoption, ambiguous IR4.0 concept, shortage of strategic guidance of roadmaps, absence of cost-benefit analysis of IR4.0 technologies, technical challenges, no standardization, insufficient knowledge of talent needed for IR4.0, exposure to cyber threats, scalability, and psychosocial risks for the existing workforce – as obstacles to adopting IR4.0.

Admittedly, Malaysia's advantages include:

- Its strategic location as an e-commerce and logistic hub
- Its good infrastructure, with 30 highways, 5 international airports and 7 international seaports having good access to all parts of the country, with the Malaysian Communications and Multimedia Commission 2018 statistics showing 39.4 broadband subscriptions, 3G and 4G/LTE systems reaching 94.7 and 79.7% population coverage
- One of lowest rents in Grade A office space, the lowest living cost in Asia. Investment funds are also abundant, and developers/construction companies experienced.
- Industrial zones offering investment incentives. But these incentives are not unique to Malaysia.

On the other hand, some challenges are:

- Companies are reluctant to embrace change in the face of costs and uncertainty;
- Shortage of talent – of STEM graduates, and insufficient focus on digital literacy and innovation, resulting in a less adaptable workforce (Kaur, 2019b);
- Stringent regulation – red tape, endemic corruption, many sectors tightly controlled by state monopolies or government led corporations (GLCs); and
- Technical and Vocational Education and Training's (TVET) limited success, graduate unemployment, racial discrimination, and political issues prompting brain drain that adversely affected high-tech and high-value industrial production (Mustapha 2017; Selangor Journal, 2022).

Add to these the phenomenon of premature deindustrialization (Rasiah, 2011) and the plunge into real estate services (Gomez et al, 2021), it is difficult to concur with the government's rosy projections of accomplishments. Or doubt the various stakeholders' scepticism that IR4.0 is now in place. It is therefore little wonder that an article in the magazine *TMOne (*2019) asked: "Industry 4.0 is here: where are the manufacturers?" pointing its fingers at the reliance on "low-skill foreign workers." The answer to this question lies in upgrading Malaysia's human capital. That task is shouldered by education.

Higher Education and IR4.0

The arrival of IR4.0 poses major challenges for education, defined to cover the formal academic especially higher education sector to which most students and their parents gravitate, but also work-based training generally referred to as TVET which has not received much attention until recently. Both subsectors have to deal with so many changes in the environment in their role in nurturing the workforce to be IR4.0-ready. These changes include the nature of employment as there could be reduced demand for entry-level graduates while those with specializations would remain to be sought after. The structure of employment will also change as the demand for different types of goods and services change. Technologies at work and for learning are also changing. Partly responding to technological changes, student study habits will evolve to take advantage of new capabilities. The new environment will require a major restructuring of education systems and pedagogy just to keep pace. At the same time, these disruptions offer a real opportunity for fundamental education reform that, if successful, will produce a creative and innovative workforce.

Given these deficiencies, what role can education, specifically higher education, play to enable all stakeholders to be current in IR4.0 knowledge and use? And what type of education is best suited to ensuring proficiency? To answer these questions, those who will form the workforce in the future IR4.0 environment need to be profiled. Kozinski (2017) characterized these Generation-Z students as fully engaged in learning but wanting to control this process. They do not fear challenges. enjoy group discussion and collaborate in teams in a highly interactive environment. For them, learning is not limited geographically and intertemporally; they can learn anywhere and anytime and have familiarity with the latest technology.

In this environment, what constitutes the appropriate pedagogy and approach that can be effectively utilized? Pedagogically, communication and collaborating and collaborative skills would assume greater prominence, together with digital and data literacy. There should be opportunities for more individualized modes of learning to suit individual students' needs (Mustapha, 2017). The use of blended learning between traditional instruction and Massive Open Online Courses (MOOCs) and deeper learning through more use of practice-oriented learning or learning-by-doing should be prioritised. At the same time, the multitude of skills required in IR4.0 would mean the offer of packages of interdisciplinary course offerings such as engineering, business administration and computer science. Corresponding to IR4.0, this state of education has been called Education 4.0 (Haron, 2018).

The success of this transformation depends crucially on at least three factors. First, because digital technology relies on the Internet, the use of this technology is available only to those with Internet connections, possibly magnifying the divide between the more affluent haves and the less affluent have-nots. Second, even for students with the means to develop new ways of learning, the role of teachers in motivating learning while introducing new ways of doing things is even more vital. Miranda et al, (2021, p. 1) listed the following attributes teachers needed to possess: competencies, learning methods, ICT and infrastructure. Even as students need to master vital media for guiding and transferring new skills, teachers' commitment matters. Some resistance to change, given uncertainties over methods and outcomes, as well as gain familiarity with new techniques, is inevitable. This resistance may take the form of complaints of insufficient time to integrate new content with old, focus on ensuring students pass examinations, loss of control in trying new content, reliance on textbooks and lack of ICT familiarity. Arguably the greatest change in teacher mindset will come from recognising that the student, rather than the teacher, should be the centre of attention (Gerstein, 2014).

But what are Malaysia's higher education system's weaknesses that require rectifying, especially with respect to IR4.0 readiness?

The first is the overall decline of standards that have seen a widening gulf between Malaysian public universities and their peers in neighbouring Singapore and Hong Kong. The National University of Singapore has been ranked as high as third in THES' Asia Rankings, while Nanyang Technical University placed 5th in 2021. The University of Hong Kong placed 4th, Chinese University of Hong Kong 7th. Malaysia's top university, the University of Malaya, achieved at most 49th position. The reasons for this widening gulf are well-known. Mukherji and Wong (2011) compared the National University of Singapore with the subsequently established University of Malaya and found that while the former enrolled students by merit, the latter also does so based on affirmative action. This academic distortion supplements the shortage of Malaysian graduates on account of the high attrition rate among male students during secondary school (Cheong & Yong, 2022)

Affirmative action-based policies have also distorted the composition of higher education enrolment, skewing enrolment away from STEM subjects towards liberal arts and social sciences subjects, allowing those students to opt for "softer" subjects and draining the already modest supply of the stock of expertise in the physical sciences.

A further factor not favourable to Malaysia's human capital accumulation is the tendency for boys more than girls to drop out at critical points of their educational journey (Cheong & Yong, 2022).

This has robbed male students of their opportunity to proceed to tertiary education. The combined impact of these factors is a smaller proportion of students in tertiary education.

The limited number of tertiary education students notwithstanding, a significant number of university graduates remain unemployed 6 months after their graduation, suggesting that there may be a mismatch between what they learned and what employers expect (Roy, 2020). The role of English language proficiency for communication, critical thinking and problem solving particularly important for IR4.0 are often cited as missing among Malaysian university graduates, and cannot be nurtured by the existing courses arbitrarily imposed by the Ministry of Education, such as on Islam and moral studies.

The second weakness of Malaysian higher education is the tight control exercised by the government over the sector. All political activity is not allowed for students who are required to sign a pledge before enrolling. Now that the voting age has been lowered to 18, forbidding students' involvement in political activities no longer makes sense. It is the constitutional right of students to be politically active. Indeed, these regulations are unconstitutional. Besides, political participation constitutes an important pathway to grooming leadership.

All course content and new course offerings require Ministry approval but this has not stopped the Ministry from mandating course offerings that have little to do with the creative thinking required for mastery over IR4.0 processes. All senior appointments have to be approved by the Ministry, with political appointees not uncommon.

Malaysian universities' loss of autonomy dates from the Universities and University Colleges Act (UUCA) in 1971 shortly after the 1969 race riots. The UUCA severely curtailed whatever autonomy universities had, with the vice chancellor being appointed on the advice of the prime minister. As Chang (2017) noted, universities' autonomy are rhetorical, at best. Universities have limited freedom in allocating research grants or funding, given the need to follow strict procurement procedures. This view was corroborated elsewhere (Wan Saiful, 2016).

In terms of private sector education, regulations also apply to course offerings even by private tertiary institutions even though the government has no funding obligations for them. Arguably, the greatest obstacle is the tradition of teaching in academic circles to prepare students for assessments and focus on knowledge. This approach is antithetical to what is required for IR4.0.

A final factor is the subsidiary role assigned to TVET as a discipline, the public impression being that TVET is the refuge of students unsuccessful in their academic studies (Cheong & Lee, 2016). This has been the reason why the quotas for TVET in Malaysia remain unfilled despite government promises to elevate its status. The fact that most TVET programmes are offered at low levels and that paper qualifications still dominate TVET staff recruitment will require some convincing. Malaysia's enrolment of under 200,000 TVET students pales beside the enrollments of 600,000, 500,000, and a similar number in Germany, Singapore and South Korea (UNESCO UNEVOC, 2018; 2019). It did not help that a multitude of institutions under various government ministries offer TVET programmes but programme coordination is wanting. Employers for their part have begun to give fuller recognition to TVET graduates. But still not fully. As a result, as Boo (2018) noted, despite Malaysia enjoying near full employment, youth unemployment was much higher than the national average, with graduate unemployment a major share of youth unemployment. Many of these issues represent a reprise of those raised in the World Bank SABER Report (World Bank, 2013) a decade ago.

Conclusion: Implications for Malaysia

Malaysia has reached a critical juncture in its industrialization with the opportunity to upgrade its production technique and enhance competitiveness. But in terms of Malaysia's preparedness to take advantage of IR4,0, the conclusion must be that it is not there yet, Surveys of Malaysian businesses show the lack of preparedness, blame the government because they lack knowledge on how to access government support and because the full benefits offered by IR4.0 have not been widely publicized. The government for its part felt that it has given the importance of IR4.0 adequate publicity. The enterprise sector itself is not blameless, opting to select the low-cost low-skill model and resisting all efforts to raise minimum wages and being reluctant to upgrade technology.

Education could have been used to increase awareness and acceptance of IR4.0 techniques but even here, despite many models available, limited progress has been made. Education technology and pedagogy need to be readily available. It is the government's approach, reflected in its education policy, that proves to be antithetical to the aims of IR4.0. For instance, the government's tight control of the education system, including recruitment of staff, course content and research, with no room for 'thinking outside the box", will not permit creative thoughts. Add to this adherence to the traditional system of education in which teachers see their performance judged by how well they can coach their students to pass examinations, and any move to Education 4.0 will be difficult to materialize.

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Book Review

Capitalism, Pedagogy, and the Politics of Being. By: Noah De Lissovoy (2022), 208 pages. ISBN 978-1350157453. London: Bloomsbury Publishing

De Lissovoy's new book explores the social phenomenon he observed, and is an attempt to find a better response to the domination imposed on people of colour. It is an enjoyable book albeit one not entirely meant as a light reading material. Understanding the gist of the book requires at least an idea of Marxist, Decolonial theory, critical theory, Freud's theory, Thomas Piketty's work, Robinson's, Dewey's, and Freire's to name a few. Building on the literature around racial capitalism, the book offers fresh insights on the possibility of viewing the pervasiveness of neoliberalism, and capitalism in a racial light; one which attempts to challenge the very foundation of these deep-seated ideologies that are weighing down on an expanding society and a rapidly degrading ecosystem. Works critiquing capitalism is not new, and the mentioning of Marxist theory in discussing capitalism is practically a must. Likewise, critique of the remnants of colonial shadows in the modern world is not new, and decolonial theory has been around for decades. But to link these two together, while roping in a basis of Freud's psychoanalysis theory that has been reimagined to view outward phenomenon rather than be directed inwards, is refreshing.

The flow of De Lissovoy's argument with the three parts structure of the book is easy to follow. The first part of the book dealt primarily with the framework proposed for understanding the current manifestation of capitalism. The second part, encompassing three chapters, ties the framework detailed in the first part to the current form of neoliberalism, emphasising the argument on how "race and racism are central to education" (p. 6). The third part, containing the remaining three chapters, provided a hopeful tone of how emancipatory praxis could challenge and redefine the current status quo confined to the capitalistic mode of being.

The author's clear and straightforward analysis of the hidden messages behind the current mode of operation at large, and in education, makes it an enjoyable read. A clear explanation of the "doublespeak"—what the action claimed to achieve, and what the action actually meant to achieve—present in today's social operations gave readers a deeper understanding of the underlying messages behind the actions of those in the upper echelons. Likewise, the author's attempt to go beyond the racial capitalism narrative by exploring a different way of perceiving "the fundamental categories of accumulation and value" (p.32) enriched the literature on links between coloniality, colonialism, and capitalism. Also, the contents do provide much-needed food for thoughts on how the neoliberal frame of mind has seeped into many facades of the modern world. With the "empowerment", "public-private partnership" and "change" notions seen across many sectors, one would start to believe that these are common, accepted, or even beneficial aspects of development towards a better tomorrow. That is, until the reality of what it entails and the message behind it pulled one back to reality; that they are but camouflage for a world where the supposed charity projects are racially based feel-good events meant to advertise the superiority of the whites.

In response to the deep-seated influence of capitalism on modernity, the author proposed a culturally and historically sensitive meso-curriculum (which supposedly sketches out the broad historical and social problems of today) covering key themes on continental and global levels. To confront capitalism in and through education, the key themes proposed include concepts such as extractivism, precritization, gender-based violence, ecological destruction, surveillance and control. The concept of reimagining a tomorrow with greater plurality is not new, with many curriculums globally attempting to be more holistic in their coverage. The framework proposed has a promising potential in realising a generation of culturally attuned individuals who would be more critical to

ISSN 2232-1802 doi: 10.14425/jice.2022.11.2.0612

society's mode of operation. The concern lies in whether and how it could be realistically practised in an actual classroom.

At this point, several thoughts surfaced regarding the (1) link between racism and capitalism and the (2) curious absence of any mention regarding new native elites of ex-colony in perpetuating the violence that enabled exploitation. The deleterious effects of racism on equality around the globe, and the authors' argument on how racism seeps into all facades of modernity, enabling and perpetuating the influence of capitalism are undeniable. Contradicting the author's argument, it is also true that even in predominantly monoracial societies, inequalities and oppression encouraged by the elites exist. This suggests that there are limits to the author's arguments on the link between capitalism, neoliberalism and racism.

This brings us to the next thought, the author suggests that the link between racism and capitalism is a global phenomenon. There are examples of how the American white elites try to expand their influence and amass greater domination over non-whites (locally and abroad) through charity. But there are no discussions on how native elites in ex-colonial territory fit into this bigger picture. It is hard to argue that the native elites of the same race as those oppressed are racist capitalists. In this situation, how does this same race violence, exploitation, and oppression fits into the neoliberal hegemony?

Capitalism, Pedagogy and the Politics of Being came the same year United Nations General Assembly made a momentous declaration that it is a universal human right to live in a clean, healthy and sustainable environment. Although the declaration is not legally binding, it is a step in the right direction for the fight towards climate and environmental justice in a world that is operating in a capitalistic mode. With that, a book aimed at encouraging an alternative imagination of the capitalistic influence on pedagogy, and on many facets of life, is definitely a good addition to the literature.

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Book Review

Shadow Education in Africa: Private Supplementary Tutoring and its Policy Implications. By: Mark Bray (2021), 91 pages. ISBN 978-988-14241-9-8. Hong Kong: Comparative Education Research Centre, The University of Hong Kong.

The shadow presented in this book is a vivid metaphor for private supplementary tutoring in Africa. The metaphor is used because much tutoring mimics schooling: as the curriculum changes in the schools, so it changes in the shadow; and as the school sector grows, so does the shadow sector.

Mark Bray is well known for his comparative work on this theme across the world. This specific volume draws on his experience as a teacher first in Kenya and then in Nigeria, his postgraduate training in African Studies, and his multiple visits to countries across Africa when Director of UNESCO's International Institute for Educational Planning (IIEP). The book presents intricate information about private tutoring and the forces that shape it. Africa is treated as a whole, i.e. including Arabic-speaking North Africa as well as Anglophone, Francophone and Lusophone Sub-Saharan Africa. This presents an instructive arena for examining commonality and diversity, and for comparing African patterns with those in other world regions.

The book originates in a background paper for UNESCO's Global Education Monitoring (GEM) Report. These regular UNESCO reports assess progress towards the fourth of the United Nations' Sustainable Development Goals (SDG4). The 2021/22 edition focused on non-state actors in education. Most obvious among these actors are private schools, but also among them are tutorial companies and school teachers, including teachers in public schools who in their spare time provide private tutoring.

The introductory chapter shows the significance of shadow education within the Education for All (EFA) agenda launched by UNESCO and partners in 1990, the Millennium Development Goals (MDGs) set by the United Nations in 2000, and the SDGs set in 2015. The chapter vividly shows why shadow education is important and outlines the roles that different stakeholders play.

Chapter two presents the definitions and scope of the book. The focus is on paid private supplementary tutoring in academic subjects outside school hours. The chapter outlines key demographic, economic and political factors which have shaped education around the continent and leave continuing legacies. Forces include neoliberalism, privatization, and ongoing neocolonial influences.

The scale of shadow education is highlighted in chapter three. The author presents a picture of the whole continent but also highlights gaps needing attention in many countries. Some shadow education is provided on company premises, but much is informal in the homes of teachers or students. The chapter comments on the factors underlying the choice of location, and the reasons why many serving teachers decide to offer tutoring. Among these reasons, most obvious is the pressure on teachers to increase incomes in the context of low official salaries.

The powerful interplay between the provision and receipt of private tutoring is discussed in chapter four. The book examines the factors contributing to the shadow education marketplace from both international and local perspectives. The fragility of schooling, but also of shadow education, are discussed from social, political, and economic angles. Different school policies and curricula are also discussed, affirming the intricate role that education plays in communities. The chapter also highlights the impact of the COVID-19 pandemic when schools were closed and private tutoring was therefore given added impetus to bridge gaps.

ISSN 2232-1802 doi: 10.14425/jice.2022.11.2.0222

The overall pros and cons of private tutoring are assessed in chapter five. Effects of shadow education on learners, teachers and parents are carefully unveiled. Despite helping learners to access quality education, private tutoring to some extent tampers with the instruction processes of 'legitimate' schools. It also contributes to social inequalities, especially since low-income families cannot afford shadow education.

Chapter six turns to the policy implications. First, it suggests, is the need to secure better data on the scale and nature of the shadow sector. Then possibilities are presented for regulation, both of companies and of teachers who provide tutoring. A priority might be to prohibit teachers from providing private tutoring to their existing students, in order to reduce the dangers of conflict of interest between public and private roles. As the chapter points out, teachers who offer private tutoring to their students might deliberately cut the content in their regular classes in order to expand demand. Other regulatory policies may focus on teachers who provide tutoring to other students in their schools and/or in different schools, though a starting point should be to ensure that basic salaries are adequate and therefore that teachers do not need to secure extra incomes. Academics can help by improving data collection and by identifying paths that can be considered by policymakers in local contexts.

The concluding chapter links back to SDG4. It considers not only the quantity and quality of education but also the interplay of public and private actors. Shadow education, it points out, will not disappear even if the quality of schooling improves. This is because societies are increasingly competitive and families find themselves forced to secure supplements. In all its complexities, therefore, shadow education is a reality to be confronted with. It is a powerful force, with both sweet and bitter elements alongside mainstream schooling.

In summary, Mark Bray has presented a well-structured book that both specialists and newcomers will find informative and easy to read. It addresses a significant issue that has received inadequate attention worldwide and particularly in Africa. Specialists in comparative education will find insights from multiple levels. Within countries are comparisons of schools, companies, provinces, socio-economic groups, and rural/urban areas. Cross-nationally are comparisons of Arabic-speaking, Anglophone, Francophone and Lusophone regions; and globally the book compares Africa as a whole with other continents and world regions.

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