Prospects for technical and vocational education and training (TVET) in Nigeria: Bridging the gap between policy document and implementation

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This paper discusses the prospects technical and vocational education and training (TVET) in Nigeria through bridging the gap between the policy document and practice. At the 1969 National Curriculum Conference and the eventual emergence of the National Policy on Education (NPE) in 1977, TVET was given prominence but, unfortunately, in theory only. However, the imperative of TVET for national development is no longer arguable, especially in the face of a dwindling economy, mass unemployment and the irrelevance of some academic content to societal needs. In the conceptual framework of globalization of education, this paper discusses the gaps between the TVET policy document and practice. This is historical research for which both primary and secondary sources of information were explored, including: all editions of the NPE, the Internet, and relevant journals and textbooks. A number of recommendations are made including that making education relevant to the needs of the society is desirable.

Keywords: national policy on education (NPE); policy implementation; technical and vocational education training (TVET); self-reliance

INTRODUCTION: HISTORICAL BACKGROUND

In Nigeria, technical education had a slow start and developed less quickly than literacy education, which was pioneered by the voluntary agencies. This was partly because it is much more expensive in terms of staff and equipment, and because 'the Christian missions were more interested in a native's ability to read the Bible than in his ability to turn screws and prime water-pumps' (Fafunwa, 1974, p. 195). Therefore, the Western education that was introduced in 1842 did not emphasize the acquisition of practical skills to make citizens become self-reliant, rather it was to make whoever had the opportunity to acquire it serve the purpose of the missionaries. The failure of Western education to include the learning of practical skills started the erosion of technical education because it was even practiced in the traditional education setting through the apprenticeship system. The curriculum was not integrated and comprehensive. This has culminated in the production of students with head knowledge, hearts underutilized and without practical use of the hands. This outcome is contrary to Akinpelu's (1981) view that "the hand and the brain evolved together; hence, technical and vocational education, on the one hand, and liberal and

general education, on the other, must go together, inseparably, if violence is not to be done to the natural process of growth in man" (p. 82).

The 1925 Memorandum on *Native Education in British Tropical Africa*, was an outcome of Phelps-Stokes Commission report, published in 1922, and showed the "appalling low government aid and the dubious quality of education" in Africa (Taiwo, 1980, p. 70). It became the first broad principle set as a framework for education and recognised the importance of technical and vocational education and training (TVET). It emphasised that "education should be adapted to the mentality, aptitudes, occupations and traditions of the various peoples, conserving as far as possible all sound and healthy elements in the fabrics of their social life" (Taiwo, 1980, p. 70). However, according to Yakubu (2011), technical education did not attract government attention until the world economic depression in the 1930s, which made it uneconomic for the colonial administration to continue bringing expatriates to meet its needs. Hence, colonial administrations started setting up training schools to produce middle level technical manpower; among the training schools was the Yaba Higher College, which was established in 1932.

The 1960 Ashby Commission report, titled "Investment in Education," (Taiwo, 1980, p. 140), also emphasized the importance of technical and commercial education and that it should be a compulsory part of the curriculum in primary and secondary schools so that children would develop an appreciation of manual and skilled labour. This recommendation led to the establishment of a number of comprehensive high schools; however, these schools soon reverted to more traditional grammar-focused education systems because of a lack of funding and proper monitoring.

In 1977, when the National Policy on Education (NPE) was first published, the issue of acquisition of practical skills to make students more self-reliant was incorporated (FRN, 1977, p. 13). The 6-3-3-4 (6 years of primary education, 3 years each of Junior and Senior secondary education, and 4 years of Higher education) system of education implemented in 1982 should have been a self-reliant policy but, in reality, it was not to be because of the gap between the policy document and the implementation, including: a dearth of qualified and competent teachers; infrastructure decay; lack of standardization and development of non-formal TVET; and a low level of funding for the programmes. TVET, no doubt, can serve as a bail-out from unemployment, underdevelopment and it can boost the economy of any nation if properly implemented and monitored (FRN, 2013). This fact has been recognized and accepted in Nigeria by various governments but the problem is how to make it work.

The consensus at the end of a workshop on "Technical Education: A Foundation for a Healthy Economy" organised by the Federal Ministry of Education (FME) and Youth Development in collaboration with UNESCO and others in 1994 was that the state of technical education in Nigeria is most unsatisfactory. Some participants believed that technical education had reached a point of crisis. Adequate attention has not been given to the TVET sector. It should be noted also that there is no magic for reformation except for proper monitoring of everything that has to do with TVET. It has now dawned on most Nigerians that acquisition of practical skills with theoretical skills could be a means of creating jobs and could go a long way towards solving unemployment issues in Nigeria.

This is why the present administration in Nigeria is orchestrating a method of placing a premium on TVET and why institutions of higher learning are now introducing entrepreneurial courses in their curricula.

STATEMENT OF THE PROBLEM

The ability of Nigeria to realise the vision of becoming one of the 20 largest economies in the world by the year 2020 is largely dependent on the capacity to transform its youth into highly skilled and competent citizens through TVET (FRN, 2013, p. 73). This statement is a truism and related to functionalism as the main guiding principle of education in the traditional Nigerian society. A careful examination of the development and practice of formal Western education in Nigeria seems to lack this all important principle. This had resulted in the production of youth who cannot contribute to the economic growth of the nation, they are not self-reliant or functional, thereby swelling unemployment numbers; the National Bureau of Statistics reports such numbers rising consistently from 6.4 percent in 2014 to 13.3 percent in the second quarter of 2016. Some youth have even resorted to the "half-a-day" programme (learning a trade after school hours with master craftsmen) to ensure they will not be made redundant after graduation. Such an outcome demonstrates there is a gap between the intent of the TVET policy and implementation/practice of the policy. Governments at all levels in Nigeria should attend to making education functional, especially through proper implementation and monitoring of the TVET policy. In reality, there are good policies on paper that are not being implemented either because of corruption or inadequate funding. Those that are being implemented are not properly monitored and evaluated. Unless the gap between policy and practice is bridged, TVET may not serve its purpose in Nigeria.

TECHNICAL AND VOCATIONAL EDUCATION TRAINING

The Federal Ministry of Education (FME) defines vocational education as education that has "a specific relation to working life" and is "closely related to, but not identical with, the concept of training (or vocational training), which tends to focus on learning specific skills that are required in particular work places. Vocational education, therefore, is clearly distinguishable from academic education" (FME, 2007, p. 135). However, section 5, paragraph 29 of the NPE (FRN, 1998) notes that vocational education is that form of education which is obtainable at the technical colleges. This is equivalent to the senior secondary education but designed for individuals to acquire practical skills, basic and scientific knowledge, and the attitude required to be craftsmen and technicians at sub-professional level. The 2004 edition of the NPE (FRN, 2004) section 7, paragraph 40, attempted a more comprehensive definition of the subject as: "those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life." The 2013 edition of NPE (FRN, 2013) section 3, paragraph 49 refers to "those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and

knowledge relating to occupations in various sectors of economic and social life as TVET. The definitions of TVET in the 2004 edition of NPE are:

- an integral part of general education;
- a means of preparing for occupational fields, for effective participation in the world of work;
- an aspect of life-long learning and preparation for responsible citizenship;
- an instrument of promoting environmentally sound sustainable development; and
- a method of alleviating poverty especially though pre-technical and vocational education.

These definitions are comprehensive, with the final item being the current driver of practice in Nigeria. TVET is also emphasised in section 3, paragraph 58, of NPE (FRN, 2013) as regards curriculum of vocational enterprise institutions (VEI) that it "shall cover all vocational and craftsmanship areas such Adire, and other indigenous fabric making, artisans, apprenticeship etc."

Emergence of TVET in the NPE

At the 1969 National Curriculum Conference (NCC), Naibi (1972) advocated that TVET should even be incorporated into the primary school curriculum to emphasize its importance. He noted that:

> In developed countries where there is universal education up to secondary level, vocational education could wait till after primary education. In Nigeria and many other African countries the majority of children have an opportunity of only primary education. For this reason we cannot wait until after primary education to provide our children with vocational education . . . Many parents are not keen on sending their children to school only to learn academic subjects and for them to return to them after schooling without acquiring any valuable skill. (p. 12)

Naibi's submission to the 1969 curriculum conference set the agenda for the importance of TVET and gave it a space in the NPE which was the outcome of NCC. The first edition of the NPE was published in 1977 and subsequently reviewed in 1981, 1988, 2004, and 2013. It is important to note that all the revisions unequivocally stated the importance and the objectives of TVET, though the training was given different names: Technical Education in 1981; Polytechnic and Monotechnics Education in 1988; Technical and Vocational Education in 2004; and Technical and Vocational Education and Training in 2013.

Goals of TVET in the NPE

The goals of TVET in Nigeria were stated in the NPE and were believed to have the capacity to advance the economy of the nation if properly implemented and monitored. According to Obasanjo (2012, p. 3), an objective that education must achieve in order to make it more relevant to the country's development is the promotion of the culture of productivity by enabling every individual to discover the creative genius within. The individual must apply this creative genius within him/her to improve existing skills and techniques for performing specific tasks, thereby increasing the efficiency of personal societal efforts; indeed, this is related to the goals of TVET as stipulated in various versions of the NPE:

- provide trained manpower in the applied sciences, technology and business, particularly in craft, and advanced craft at technical levels; (NPE, 1998, sec. 5, para 31)

- provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; (NPE 2004, sec. 7, para. 42)

- give training and impart the necessary skills to individuals who shall be economically self-reliant. (NPE 2013, sec. 3, para. 50)

In spite of these goals for education, in place in black and white since 1977, the reality is that Nigeria still depends in a major way on the importation of goods, including common items like pencils and erasers. The challenge is to provide students with practical skills and properly equip them to produce items to meet local and export needs, and, thus, help the economy to become buoyant and people to become self-reliant. The findings of this research are, therefore, relevant at this time.

NATIONAL BOARD FOR TECHNICAL EDUCATION (NBTE) AND ITS ROLES IN TVET

In "Nigeria Third National Development Plan, 1975-80," part of the focus was reforming the content of general education to make it more responsive to the socio-economic needs of the country; and to make an impact in the areas of technological education so as to meet the growing needs of the economy. In the process, the Federal Government of Nigeria (FGN) identified the acute shortage of technical manpower as a major constraint towards the execution of the Development Plan. As part of the response to this, the National Board for Technical Education (NBTE) was established by *Act No. 9 of 11th January, 1977*.

The NBTE is a principal organ of FME and specifically created to handle all aspects of Technical and Vocational Education falling outside of University Education. In addition to providing standardized minimum guide curricula for TVET, the Board supervises and regulates, through an accreditation process, the programs offered by technical institutions (as listed in Table 1) at secondary and post-secondary school levels. The Board is also involved with the funding of Polytechnics owned by the FRN (http://www.nbte.gov.ng).

To the best of its ability, the NBTE has tried to fulfil its functions to the extent it is able within the limits of government funding for its operation. As of January 2014, 366 approved institutions are responsible for TVET across the nation, including: 75 polytechnics with 225,171 students; 31 colleges of agriculture; 13 colleges of health sciences; 18 other monotechnics with 19,923 students; 80 innovation enterprise institutions (IEI); 55 vocational enterprise institutions (VEI) with 3,589 students; and 94 technical colleges with 90,038 students (Obomanu, 2015, p. 19). These are capable of producing citizens who are poised to develop the economy if there is adequate funding and government commitment.

Table 1: TVET Institutions, programmes and number of courses available as at June 2012

Institution	No of programmes	No of courses
Polytechnics, Monotechnics, colleges of Health Technology	11	94
Technical colleges	10	41
Innovation Enterprise Institutions (IEIs) and Vocational Enterprise Institutions (VIEs)	8	20

Source: http://www.nbte.gov.ng/Programes.html

With the array of courses officially approved in the various TVET institutions in Nigeria, one would have thought that there would be a mass production of youths with technical knowhow, but this is not the case because actual implementation is at variance with policy. Today, according to Ojerinde (2011, p. 111), "institutions called Technical and Vocational Schools are a shadow of themselves where the science equipment and laboratory apparatus are heard of, rather than seen. Where the equipment is available, it has become obsolete."

GAPS BETWEEN POLICY DOCUMENT AND IMPLEMENTATION OF TVET

For any policy to be successful, there must be some inbuilt mechanisms that make room for the processes of implementation, monitoring, supervision, feedback, evaluation, improvement, reorientation, effectiveness, and the like. In consonance with this, Akindoyeni's (2014), among others, submitted that for any policy to be effective it must address a definitive need, have a legal instrument for the implementation with identifiable and measurable strategies, the interpretation must not be ambiguous, provide for periodic review, and the human capital capacity as well as the range of implementation resources must be identifiable. A problem with the TVET policy in Nigeria is that it does not conform with some of the properties that a good policy should possess. This is corroborated by the submission of the Presidential Task Team on Education (FRN, 2011) that "policies have not always been given the chance to prove their effectiveness (or failure to do so), as un-coordinated changes tend to be dropped in and out in a haphazard manner dictated by moods in the place of reason" (p. 17), and as administrations change.

It was observed at the 1994 conference on TVET that technical institutions have a primary role in producing a wide variety of technical manpower to guarantee a technological base for the 21st Century in Nigeria in line with paragraph 50c of the NPE (FRN, 2013). The institutions are also expected to liaise with industries to ensure the currency and relevance of their curricula, and to introduce new courses in response to the socio-economic needs-of the nation, (FRN, 2013, para 58i). But these roles have not been fulfilled because of general national apathy to technical education, insufficient funding, lack of equipment for practical training and insufficient qualified teachers for technical institutions as identified since 1994. Not only have the roles be unfulfilled, circumstances are deteriorating, despite strategies meant to turn around the situation: restructuring and strengthening the existing scholarship and Student Loan Boards to target TVET students; upgrading facilities in selected Polytechnics to make them centres of excellence; upgrading of facilities in selected

Technical Colleges to make them centres of excellence (4-year Strategic Plan for the Development of the Education Sector 2011-2015: 73, secs 6.20, 6.21 and 6.22).

In the 4-year "Strategic Plan for the Development of the Education Sector 2011-2015," it was observed that government policy in the past had not accorded TVET its rightful place within the education subsector of the country despite policy mandates. "This can be seen in the placement of ceiling on career progression on polytechnic staff and graduates" (FRN, 2013, p. 74). For instance, holders of a Higher National Diploma (HND) are referred to as instructors and not lecturers, and their salaries are pegged at a level lower than their university graduate counterparts at the last grade level. Poor condition of service for staff and a relatively low level of funding of programs, despite the expensive nature of TVET, among other causes, are strong barriers for success in the sector.

UNESCO recommends that at least 26 percent of a nation's budget should be allocated to the education sector. However, since 2000, the highest budgetary allocation for education in Nigeria was 10.4 percent in 2006 (Federal Budget Office, 2016). The yearly average was 6.23 percent, and the lowest was 3.1 percent in 2003. Whatever percent allocation is then shared among various service divisions as shown in the Table 2.

Table 2: Allocation to various service delivery structures

Organisation/Institution	%
Ministry	8.7
Parastatals (excluding NUC)	12.5
Polytechnics	13.4
Colleges of Education	9.1
NUC and Universities	47.1
Federal Government Colleges	9.2
Total	**100.0**

Source: PPTE Report, 2013, p. 37

Other challenges, according to Olaitan (1994), FME (2007), FME (2012) and FRN (2013), are:

- low enrolment
- infrastructural decay: inadequate equipment and training materials
- low remuneration for skilled vocational workers
- low societal estimation of TVET
- poor private sector participation in the implementation of TVET programmes
- low level of entrepreneurship and ICT literacy and utilization
- poor learning outcomes due to poor learning environment
- use of outdated curriculum which result in a mismatch between what is taught and the needs of the labour market
- poor management of funds.

As a result of these problems, there is an overwhelming preference for general secondary education (FME, 2012, p. 54; FRN, 2013, p. 74).

It is not possible to discuss all these problems within the limitations of this paper, however, funding has an overbearing effects. Funding is necessary for the procurement of up-to-date training equipment and consumables as well as the training and retraining of technology teachers and instructors. Power supply and revitalization of the industrial sector are the other critical issues that the government should investigate. Olaitan (1994) lamented the near comatose state of the industrial sector, which is affecting skills development in the country, arguing that training institutions were supposed to interface with industries to produce the right skills.

The implementation of TVET policy, according to the NPE, is supposed to begin from the basic education level. This would give students the opportunity to be exposed to TVET early and help them to decide whether to study technical/vocational education in future. However, as identified by the FME in 2007, such opportunities are unlikely because of the lack of availability and functionality of equipment, including metalwork materials, auto-mechanics equipment, drilling machines, cutting fluids and lubricants, hand forging tools, sawing and bench tools, electrical materials, computer sets and accessories, local craft tools and, building material. With regard to the equipment, the FME's report (2007, p. 146) found:

Number expected:	81,942
Number in stock:	27,086
Number functioning:	7,421
Number in high quality:	4,055

Abimbade (2008) also sees lack of fund, inadequate facilities, tools and equipment, lack of adequate infrastructure, lack of sufficiently trained manpower and outdated curriculum as problems besetting the implementation of the TVET policy. He is also of the opinion that if the policy on TVET was well implemented, it would be capable of transforming the Nigerian society into a technologically self-sufficient and reliant nation. According to Wike (2014, p. 3), the transformation agenda of former President of Nigeria, Goodluck Jonathan, emphasized continuity, consistency, and commitment of government in policy implementation. However, it is obvious that this agenda has not been met, thereby creating gaps between policy and implementation.

Corruption has been a major problem, and the list of corrupt practices is inexhaustible in Nigeria. Contracts awarded are not executed or even completed in some cases. For instance, in 2012, the foundations of Boy-Child Vocational Schools were laid in 15 states in Nigeria but by 2014, when there was a public presentation of the transformation agenda of the former President of Nigeria, none of the schools have been completed (Wike, 2014, p. 9).

IS THE GAP BETWEEN POLICY AND IMPLEMENTATION OF TVET PECULIAR TO NIGERIA?

The problem of a gap between policy and implementation of TVET is not peculiar to Nigeria. The Presidential Task Team on Education (FRN, 2011, p. 17) observed that moving from policy documents to on-the-ground implementation always raises serious challenges, and the Nigerian case is no exception. In other African countries, TVET faces similar problems. In Botswana for instance, Pheko (2013) notes that the goal of TVET is to ensure that education systems provide the younger generation with quality education that impart key generic competencies, skills and attitudes, which would lead to a culture of lifelong learning and entrepreneurship in an ever-changing world of work. However, because of haphazard policy implementation, the government has taken control of all technical and brigade schools to ensure that they have a common curriculum and similar resources, and, thus, properly implement the country's TVET policy.

The situation in Cameroon is similar to that of Nigeria. Forje (2013) observed that the state neglected technical education in its socio-economic transformation of society and those who opted for technical education were often classified as "dropouts" or "pupils without brain." The sector, he further observed, is now suffering from inadequate infrastructure, absence of trained instructors and shortage of equipment.

Shibeshi (2013) notes that in Ethiopia vocational/technical schools that were opened could not cater for the country's manpower needs and could not serve students from all over the country. Therefore, some high schools were converted to comprehensive high schools to provide TVET. However, a study conducted on the operation of TVET by the Japan International Cooperation Agency (JICA) in 1996 found that the training provided in the comprehensive schools was of a theoretical nature and did not involve practical laboratory or workshop training.

In Uganda, the first recommendation of the Kajubi Commission on Tertiary Education, according to O'dama (2013), is that the government should expand technical and commercial/business education facilities to train technical, managerial, and professional people for national development. The government tried to implement the recommendation by refurbishing and allocating money to equip the TVET institutions. Unfortunately, the funds were misappropriated by corrupt public servants, thereby hindering success in the sector.

In response to the changing labour market and socio-economic concerns, the Zambian government launched a new TVET policy in 1996 with a focus on employment promotion, improved productivity and income generation. However, Matafwali (2013) observed that much remains to be done if TVET is to play a major role in the Zambian education system. This is because the infrastructure in most of the vocational training centres does not meet the expected standard and are characterized by low staffing levels.

Interestingly, in Zimbabwe, parents, teachers, and the public have a positive attitude to TVET because they are aware of the technical skills training component and demand from industry for graduates from TVET institutions. Therefore, it is not very easy to access

TVET because of the stringent entry requirement. The development of technical education has occupied the attention of the government of Kenya for the past 30 years (Mwamwenda & Lukhele-Olorunju, 2013). According to Amayo (2013), great efforts were made in the establishment and management of technical, industrial, vocational, and entrepreneurship training (TIVET) as part and parcel of Kenya's tertiary education programme, yet more needs to be done in establishing and equipping more TVET institutions. This is because Kenya Polytechnic and Mombasa Polytechnic have been upgraded to university colleges, which have led to lower enrolments.

VOCATIONAL AND TECHNICAL EDUCATION IN DEVELOPED NATIONS: LESSONS FOR NIGERIA

Olaitan (1994, p. 1) notes: "any study on comparative education cannot be complete without cross references and pin-pointing of lessons worth learning." He identified certain features of TVET in the US, UK, and Japan from which Nigeria can learn:

- TVET is a child of necessity. In the US it arose out of the need to develop weapons of war and dominate the world politically and economically.
- TVET programmes are utilitarian and dynamic, serving pressing local and national needs.
- TVET is a component of Basic Education. This is evident in the fact that basic education in developed countries is now considered incomplete unless the child has received occupational/vocational education. (However, sec. 3 para. 1 of the policy (FRN, 2004) and Ojerinde's (2011, p. 319) submission highlights that vocational education in Nigeria is meant for those who cannot stand the academic rigour of a 6-year secondary schooling, thus negating the spirit of this innovation.)
- Promotion of indigenous technology stimulates TVET.
- Consumption patterns affect TVET. The taste and fashion of the people must be such that encourage the expansion of local industries and stimulate industrial growth.
- Manpower development is central to TVET. In developed nations, the primary objective of vocational education is manpower development.
- Evaluation of TVET is performance-based rather than through achievement tests.
- Diversification of funding is desirable. Funding of TVET is a shared responsibility of all arms of government and industry.

All the features listed should become the focus of the Nigerian government because it is obvious TVET is a necessity in the face of a dwindling economy and rising unemployment. The current drive by the Federal Government to encourage people to patronize made-in-Nigeria goods will definitely promote indigenous technology. However, funding of vocational education in Nigeria is at present ineffective because the Federal Government is almost entirely responsible for it given that the majority of production firms and companies have closed down in Nigeria.

PROSPECTS OF BRIDGING THE GAP BETWEEN POLICY AND IMPLEMENTATION OF TVET IN NIGERIA

The Executive Secretary of NBTE, Dr. Kazaure (www.nbte.gov.ng) said that the revitalization of technical and vocational education (TVE) is a panacea for solving the problem of unemployment in Nigeria. However, this would only happen if the policy is implemented to the letter. When this is done the prospects are immeasurable (www.nbte.gov.ng).

Haipeng (2015, p. 5) stated that "in modern China, revolution was the keynote of the society at that time, the purpose of which was to seek independence and prosperity of the country"; and since the founding of new China, according to Zheng and Lu (2015), the concept of "quality education" and the implementation of TVET policy has been emphasized, so that now there is hardly a Chinese person who does not have practical skills in one area or another. This level of achievement has led to the rapid development of the economy of China, making it one of the leading nations in the world, with products made in China available in almost every country in the world.

In Nigeria, the time for revolution is now, especially in the education sector through TVET, not least because of the impact that unemployment is having on the security of Nigeria. Akanbi and Jekayinfa (2012, p. 541) observe that "when youths are gainfully employed in any society, social vices and criminal activities will be reduced." The present administration has promised to focus on TVET in the 2016 budget, and has begun a drive towards minimizing or stamping out corruption, especially in the area of the judicious use of funds meant for the implementation of TVET policy—even if such fund are inadequate, they should be spent judiciously to achieve part of the goals.

CONCLUSION

The importance of TVET in the economic and manpower development of Nigeria cannot be overemphasised, and this has been recognised by various governments and the people of Nigeria. Its importance has necessitated its inclusion in the various editions of NPE since 1977; however, there are gaps between the policy and its implementation, which has meant that the policy has not achieved its stated objectives. Kadri (2010) states that "noble policies or resolutions mean nothing without implementation. How can one measure the progress of what is not implemented?" He argued further that if the 1969 Curriculum Conference resolutions were implemented, Nigerians might be singing a sweet tune about their educational system today. The current economic reality of Nigeria, therefore, demands that urgent action be taken to redress the situation through proper implementation of the TVET policy. Obanya (2009, p. 24) believes that Nigeria needs to more closely follow current trends on TVET which would lead to a reorientation of the mindset of Nigerians. The trends are:

- TVET is a requirement for everyone's basic education.
- TVET should be predicated on a sound general education, to produce thinker-doers instead of zombies, and to ensure social respectability for TVET.

- TVET should begin with "general technological studies," to promote flexibility and versatility in learners, to equip them for the uncertainty of the 21st Century world of work.

These trends are part of what is being emphasised in this research but, most important, is the emphasis on functionalism through acquisition and utilization of practical skills, and making people job creators rather than job seekers.

RECOMMENDATIONS

Nigerians must learn from history, looking back to understand the nature of missed opportunities and mistakes. Vinovskis (2015) stressed the importance of learning from the past and the value of historical knowledge in policy-making; for instance, in 1995 the US government commissioned well-known education historians to write on what history might tell the nation and policy makers about education reform.

Making education relevant to the needs of the society is desirable. This is in line with Olaitan's (1994) observation that **"**in the mainstream secondary school, vocational subjects such as agriculture are treated as the pure sciences in content arrangement and methodology" (p. 4), which is a legacy of Colonial times. Learning by doing should be encouraged with rote learning abandoned; students should be allowed to use their native intelligence practically to discover the truth in the possibilities of becoming job creators because, "practice is the sole criterion for testing the truth" (Zhang, 2015, p. 1).

There is the need to improve the maintenance culture in Nigeria. When TVET equipment has a fault, the best thing to do is to immediately repair it to forestall further damage, however bureaucratic bottlenecks in the process of repairing damaged equipment can be frustrating and, thus, this process should be streamlined so that TVET is given the proper attention it deserves.

Olaitan (1994) believes that "improvement of vocational education in Nigeria can only be sustained through active research and development activities" (p. 4). He recommends a fully fledged centre for VET research. This centre, in Olaitan's opinion, should be charged with the responsibility for curricula appraisal of TVET, conducting and sponsoring research on the impact of TVET on the economy, developing instructional materials, and monitoring developments of TVET around the world, within the country, and their implications for national interests. It should also be involved in developing and testing innovative approaches to TVET. Apart from the establishment of such a centre, the position of Furlong (2013, p. 177) that universities can contribute to the betterment of humankind through the provision of practical skills is also laudable; they may also, through vocationally oriented research, contribute to scientific or other forms of rationally based insight into educational processes. Universities in Nigeria should take up this challenge and justify such investment by the government.

Akanbi (2012) believed that ingenuity should be rewarded and encouraged among the youth. Those who have displayed innovative skills should be encouraged by the

government to improve on their innovations and thus serve to encourage others to put to use latent skills.

To bridge the gaps, TVET policy should certify all the properties of a good policy, but this cannot work unless there is sufficient funding and effective monitoring of the sector. More funds for education could also be raised if the country expands its tax base, axes unnecessary tax holidays for foreign investors, and challenges aggressive tax avoidance (Gustafsson-Wright & Smith, 2014). Regular appraisal and evaluation is necessary if the policy is to achieve its goals and if "all of us are willing to talk to ourselves to do things right" (Akanbi, 2014, p. 56).

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Achievement flourishes in larger classes: Secondary school students in most countries achieved better literacy in larger classes

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There is no consensus among academics about whether children benefit from smaller classes. We analysed the data from the 2012 Programme for International Student Assessment (PISA) to test if smaller classes lead to higher performance. Advantages of using this data set are not only its size (478,120 15-year old students in 63 nations) and representativeness but also that the 2012 PISA data set, for the first time, includes the class size for each participating child. We found that, in most countries, children in smaller classes had a lower performance score in solving reading comprehension problems than those in larger classes. We further analysed the relationship between class size and factors that can explain this paradoxical phenomenon. Although grouping of students by ability and the socioeconomic status of parents played some role in some countries, these factors cannot fully explain the effect. We finish by discussing the overlooked potential advantages of larger classes.

Keywords: class size; Programme for International Student Assessment (PISA); Literacy; Larger Classes.

INTRODUCTION

Children's school performance is of critical importance for economies because school performance is directly related to a nation's opportunity to satisfy the need for skilled workers. It is because of this link between education and economic output that the Organisation for Economic Cooperation and Development (OECD) funds the Programme for International Student Assessment (PISA). One of the aims of PISA is to help countries to understand which factors contribute to successful educational systems, and, indeed, since the first PISA reports were published in 2000, numerous educational reforms have been inspired by these surveys (Ertl, 2006; Grek, 2009). It is argued that a 25 point increase in PISA scores for all OECD countries result in a 115 trillion US dollar GDP across nations (OECD, 2006, p. 27). Of all the factors that influence educational outcomes, class size is a much discussed factor. There is strong political and public support for the reduction of class size. In 1998, US President Clinton proposed a large

initiative to reduce class sizes in primary schools and was quoted as saying: "When class sizes go down enough, learning goes up" (Broder, 1998). This initiative received US$1.2 billion to hire 100,000 teachers and to reduce class sizes in primary schools down to an average of 18 children (The White House, 2000). Nye, Hedges and Konstantopoulos (1999) noted that many states adopted policies to reduce classroom sizes. Chingos (2013) cited a 2007 representative public US survey which found that 77% of respondents (including teachers) supported the allocation of money to reduce class sizes. Also, 81% of public school employees wanted to improve work conditions that included reduction in class sizes rather than an increase in salaries.

There have been numerous academic studies addressing the question whether or not smaller classes are actually beneficial to educational performance, as well as studies of directly related questions, such as the associated costs of class size reductions; the latter is important because teacher salaries are a large part of a school's expenditure (Clowes, 2004; OECD, 2013) and there is a teacher scarcity in a number of school subjects (UNESCO, 2013a, 2013b; Voke, 2003). In other words, even if a reduced class size would be beneficial in terms of performance improvements, it might not be value for money (Brewer, Krop, Gill, & Reichardt, 1999; Buckingham, 2003; Chingos, 2013), or it might, in fact, be impossible to provide the needed financial resources or teachers.

It is worth noting that the literature also addressed the interaction between class-size reduction and other factors. For example, Hattie (2005) and Harfitt (2015) argued that smaller classes are more beneficial in Western cultures where autonomy is valued, whereas larger classes are better for Eastern cultures that appreciate collectiveness. In East Asia, collectivist culture is shared among the Confucian heritage cultures (Oyserman, Coon, & Kemmelmeier, 2002; Phuong-Mai, Terlouw, & Pilot, 2005; Wursten & Jacobs, 2013; Yang, 1993). Various studies provided evidence that the positive impact of small classes is larger for children with difficulties and additional support needs (e.g., Bosworth, 2014; Ecalle, Magnan, & Gibert, 2006; Hanushek, 2002; Krassel & Heinesen, 2014; Molnar et. al., 1999; Mosteller, 1995; Mosteller, Light, & Sachs, 1996). However, such conclusions were contested by Cho, Glewwe, and Whitler (2012), who argue that smaller classes impact all children equally. Nonetheless, it might be the case that the benefit of class size depends on culture, which means that an international comparison of class size is important to study. Such an analysis can possibly tell for which countries it would make sense to invest in smaller classes.

Of course, the discussions about the value for money of class-size reduction only make sense if class-size reduction actually has a beneficial effect. Although there have been numerous studies about the effects of class size reduction, there is a lack of consensus. Both positive (Bascia, 2010; Breton, 2014; Cho et. al., 2012; Finn & Achilles, 1999: Finn, Gerber, & Boyd-Zaharias, 2005; Fredriksson, Öckert, & Oosterbeek, 2013; Jakubowski & Sakowski, 2006; Jepsen & Rivkin, 2009; Krueger, 2000; Nye et. al., 1999; Tienken & Achilles, 2006) and negative (Dobbelsteen, Levin, & Oosterbeek, 2002; Maasoumi, Millimet, & Rangaprasad, 2003; Morris, 1959 cited in OECD, 1974) associations between school performance and class sizes have been reported. Most of these studies are correlational with only a few experimental. Although experimental studies have theoretical advantages (e.g., they allow the determination of cause and effect), they have not lead to consensus. A good example of the lack of consensus is around one of the most famous experimental studies of class size reduction, namely the Student-Teacher Achievement Ratio (STAR) Project carried out in the 1980s in Tennessee, US. Based on

the project's data, some researchers concluded there were benefits to smaller classes (Finn & Achilles, 1999; Finn et. al. 2005; Finn, Gerber, Achilles, & Boyd-Zaharias, 2001; Krueger, 1999; Nye, Hedges, & Konstantopoulos, 2000; Mosteller, 1995; Nye et. al., 1999) while others made a convincing argument that these data do not support such conclusions (Hanushek, 1997; 1999; 2002). A meta-analysis of studies about school resources (including class size) in both primary and secondary education concluded that smaller classes and schools are positively related to academic achievement in mathematics and reading (e.g., Greenwald, Hedges & Laine, 1996; Hedges & Stock, 1983). Some studies have concluded that there are also long-term and non-academic positive outcomes of smaller classes (e.g., Chetty et. al., 2011; Dee & West, 2011).

The lack of consensus about the benefits of smaller classes can partially be explained by confounding factors. It has been argued that the benefits disappear when other factors are controlled for (Cho et.al., 2012; Ehrenberg, Brewer, Gamoran, & Willms, 2001a; Hoxby, 2000; Wößmann, 2005; Wößmann, 2003b). Also, that the gains of class-size reduction could be achieved equally (if not better) by other factors, such as parental involvement and other family factors (Browning & Heinesen, 2007; Coleman et. al., 1966; Funkhouser, 2009; Nascimento, 2008; Wößmann, 2005) or institutional factors and school resources, including teachers' factors and teaching practices (Chingos, 2012; Ehrenberg, Brewer, Gamoran, & Willms, 2001b; Finn, Pannozzo, & Achilles, 2003; Fleming, Toutant, & Raptis, 2002; Funkhouser, 2009; Hall, 2012; Hanushek, 1986, 2003; Jackson, Johnson, & Persico, 2014; Harris & Plank, 2001; Jepsen, 2015**;** Jez & Wassmer, 2015; Mueller, 2013; Panizzon, 2015; Stern, 1987; Wößmann & West, 2006; Wößmann, 2003a). Further, methodological factors might be responsible for the differences (Akerhielm, 1995; Buckingham, 2003; Schanzenbach, 2014; Hanushek, 1999; Hoxby, 2000; Krueger, 1999, 2002, 2003; Lewit & Baker, 1997).

Given the lack of consensus about the relationship between school performance and class size, we analysed the 2012 PISA dataset. Since the year 2000, the PISA organisation has published academic performance in 15 year-old school children around the world. The 2012 survey is the latest dataset, which involved nearly half a million children in 65 countries, making it the largest international educational survey. One of the advantages of PISA is that children around the world are tested on the same set of problems. Questions are not only translated into local languages, but great effort has been put into the cross-cultural comparability of the questions asked (OECD, 2014). This design makes it possible to compare performance in different cultures. A specific advantage of the 2012 PISA data set is that it contains, for the first time for each participating student, the class size in the test-language classes (e.g., English class in English-speaking countries). Because this is the first time that the class size of each participating child in a large international educational survey is available, it allows for a more detailed correlational analysis between class size and performance than hitherto possible.

If it is true that smaller classes are beneficial for performance, we expected that children in smaller classes would score higher on the PISA survey of text comprehension tasks. We expected that if the effects of sorting by ability can explain a relationship between class size and performance, this effect should not be observed in children who are in schools which do not base their admission on ability and who do not sort children based on ability within the school.

METHODS

We analysed the raw data of the 2012 PISA data set (available via http://www.oecd.org/pisa) using the statistical software R (R Core Team, 2014). This data set contains the data from 485,490 school children in 68 countries and regions. The age of children participating in PISA ranged from 15 years and 3 months to 16 years and 2 months. In addition to the data of the US as a country, the US states Florida, Massachusetts, and Connecticut also participated separately, but we have excluded those data in order not to count the same country more than once. Similarly, we excluded the separate data from the Russian city Perm, because Russia as a whole participated. Finally, we excluded the data from Liechtenstein, which had too few participants (*n*=293) for a meaningful data analysis of class size and performance. Because the variable class size (PISA variable *ST72Q01*) was not available for all students (1.5%), the analyses involving the variable class size included 478,120 students.

The class size variable *ST72Q01* appeared to have some unrealistic outlier data (ranging from 0 to 200). In order to deal with these outliers, we calculated, for each country, the 5th and 95th percentile of class sizes and only included those data that fell in this range (see Table 1). This method is supported in the literature (e.g., Motulsky, 2014**;** Osborne & Overbay, 2004). We also analysed whether the effect of "streaming" can explain any correlation between class size and performance. Streamed schools are here defined as schools that either always use ability as an admission criterion or always use ability to assign children to classes (or both). Non-streamed schools are here defined as those schools that neither use ability for admission nor group children in classes by ability (note that the PISA data set allows cross-linking of school data with individual children's data, because the student data set has for each child a school identifier).

RESULTS

The range of class sizes varied considerably within and between countries. The low end of class size ranged from 5 in Kazakhstan to 31 in Vietnam, whereas the high end of class size ranged from 24 in Finland to 52 in Taiwan. While East Asia is known for its large classes, it should be pointed out that such large classes are found elsewhere as well (e.g., countries in Latin and South America, Turkey, and Jordan had classes of 40 or higher as well, Table 1). The variability in observed class sizes ranged between countries as well, from Greece ranging from 17 to 28 children per class to Mexico ranging from 15 to 51.

In Table 1, we report, for each country or economic region, the following information: 1) Range of class size (from 5th to 95th percentile of class size). 2) Correlation between class size and reading performance. 3) Correlation between class size and socio-economic status. 4) Correlation between class size and reading performance controlled for socio-economic status (partial correlations). 5) Percentage of children in schools that either always select based on ability or always group students by ability in classes. 6) Correlation between class size and reading performance controlled for socio-economic status only for children in non-streamed schools (calculated only if more than 1000 students in such schools in a country). For each of the 63 countries and economic regions, we calculated the Pearson correlation between class size and the reading comprehension scores. Correlations ranged from *r*=-.02 in the United Arab Emirates to *r*=.51 in France

(Table 1[1]). Except for the United Arab Emirates, Singapore, Jordan, Kazakhstan, and Tunisia, we found statistically significant correlations between school performance and class size in 58 (i.e., 92%) of countries. Thus, we did *not* find a positive relationship between smaller classes and performance in any of the countries.

Table 1: OECD countries, class size, streamed classes, correlations between class size and; performance, performance with controlled SES, and performance with controlled SES for non-streamed classes

Country	Class size range 5%	Class size range 95%	Class size and performance	Class size and SES	Class size and performance controlled for SES	Streamed (%)	Class size and performance
France	14	35	0.51	0.32	0.45	31	0.38
Netherlands	14	30	0.41	0.18	0.4	82	..
Bulgaria	10	29	0.4	0.28	0.33	80	..
Luxembourg	12	27	0.39	0.28	0.34	73	..
Belgium	10	26	0.37	0.25	0.32	28	0.26
Switzerland	10	25	0.36	0.21	0.32	67	0.18
Slovak Republic	11	30	0.33	0.24	0.27	56	..
Portugal	13	28	0.32	0.26	0.26	35	0.18
Hungary	13	36	0.31	0.21	0.26	84	..
Slovenia	12	31	0.3	0.17	0.27	27	-0.01
Lithuania	11	30	0.29	0.24	0.25	50	..
Hong Kong	20	41	0.27	-0.03	0.3	92	..
Israel	10	40	0.27	0.17	0.24	78	..
Latvia (LSS)	8	29	0.27	0.3	0.19	31	..
Montenegro	18	37	0.27	0.15	0.25	52	0.1
Estonia	9	31	0.26	0.27	0.22	47	..
Thailand	18	50	0.26	0.23	0.21	81	..
Shanghai	20	49	0.26	0.16	0.23	54	..
Ireland	12	30	0.25	0.17	0.22	58	..
Serbia	13	35	0.25	0.12	0.24	79	..
Czech Republic	12	30	0.24	0.1	0.23	50	..
Japan	24	43	0.23	0.07	0.23	94	..
Romania	18	33	0.23	0.14	0.2	51	..
Greece	17	28	0.22	0.21	0.18	6	0.17
Vietnam	31	49	0.22	0.11	0.22	88	..
Germany	15	30	0.21	0.15	0.18	52	..
Italy	13	29	0.21	0.13	0.19	54	0.18
New Zealand	12	30	0.21	0.13	0.18	57	..
Peru	14	40	0.21	0.19	0.15	31	0.15
Argentina	20	38	0.2	0.18	0.17	14	0.13

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1 Please note that table 1 is mentioned in both sections (the methods and results), since it contains the data and its analysis.

Country	Class size range 5%	Class size range 95%	Class size and performance	Class size and SES	Class size and performance controlled for SES	Streamed (%)	Class size and performance
Australia	12	30	0.2	0.1	0.18	59	..
Canada	13	32	0.2	0.08	0.19	41	0.08
Austria	11	30	0.19	0.11	0.16	74	..
Korea	15	40	0.19	0.17	0.15	75	..
United Kingdom	12	30	0.19	0.01	0.21	75	..
Croatia	18	33	0.18	0.1	0.16	96	..
Russian Federation	7	29	0.18	0.23	0.11	19	..
Mexico	15	51	0.18	0.1	0.17	57	0.36
Indonesia	19	42	0.16	0.02	0.18	61	0.22
Finland	10	24	0.15	0.13	0.14	10	0.15
Iceland	7	30	0.14	0.14	0.12	22	..
Poland	15	30	0.14	0.14	0.11	19	0.1
Sweden	11	30	0.13	0.14	0.09	15	0.13
Spain	11	31	0.12	0.1	0.09	8	0.11
Macao	20	46	0.12	0.02	0.13	70	..
Costa Rica	15	36	0.08	0.12	0.05	49	..
Chile	20	45	0.07	-0.04	0.1	35	0.11
Malaysia	11	45	0.06	0.07	0.05	55	..
Norway	12	30	0.05	0.1	0.03	14	0.12
Turkey	7	40	0.05	0.04	0.04	43	0.05
Brazil	15	46	0.05	0.07	0.03	21	0.03
Colombia	19	45	0.04	0.1	0	44	0.18
Chinese Taipei	27	52	0.04	0.04	0.02	47	..
United States	12	35	0.04	0.01	0.04	40	..
Albania	9	39	0.04	..	..	57	..
Uruguay	12	36	0.04	0.08	0.01	26	0.03
Denmark	12	26	0.03	0.04	0.02	10	0.07
Qatar	20	38	0.03	-0.04	0.05	49	0.01
Kazakhstan	5	30	0.01	0.13	-0.05	56	..
Tunisia	15	34	0.01	0.08	-0.02	45	..
Jordan	14	47	-0.01	-0.04	0	34	0.13
Singapore	18	42	-0.01	-0.1	0.03	79	..
United Arab Emirates	12	35	-0.02	-0.13	0.02	81	..

Next, we investigated possible variables that can explain part of this pattern. We tested the effects of streaming and socio-economic status. Both these variables are highly relevant. Streaming means that children are grouped by ability (at class or school level), and it is possible that children with more learning difficulties were assigned to smaller classes. Further, it is well known that socio-economic status is a good predictor of school performance, including in PISA. For example, in the 2012 PISA data set, we found that the relationship between socioeconomic status and reading performance in PISA ranges from r=.12 in Macao to r=.49 in the Slovak Republic.

First, we report the role of socio-economic status. We correlated this variable with class size for each country and found that children from families with a higher socio-economic status sat in larger classes. Interestingly, the relationship between socioeconomic status and class size was similar to the relationship between performance and class size, r (60) =.770, p<.001 (Table 1). To deal with the possible confounding influence of socioeconomic status on performance, we calculated, for each country, the correlation between class size and performance controlled for socioeconomic status (using partial correlations). Using this calculation, the correlations ranged between r=-.046 in Kazakhstan to r=.452 in France (Table 1). Thus, the main difference is that with this control of socio-economic status, we found the expected negative relationship between class size and performance in only one country, namely Kazakhstan (albeit extremely weak), whereas, again, the positive effect was found in the large majority of countries (n=51 or 81%). It is possible that children were assigned to classes depending on their performance level, for example, because it is assumed that lower performing children need more attention and thus would benefit from a smaller class (Biddle & Berliner, 2002; Blatchford, Bassett, & Brown, 2008; Finn, et. al, 2001; Nye, Hedges, & Konstamtopoulos, 2002; Wilson, 2006) in which teachers have more time per child (Blatchford et. al, 2008). To test to what degree this can explain these data, we analysed the effect of streaming according to ability. The degree to which children were assigned to schools or classes by ability varied considerably between the participating countries. Greece, Spain, Denmark, and Finland have 10% or fewer participating students in streamed schools, whereas Hong Kong, Japan, and Croatia have over 90%. Of interest is that even countries with a generally comprehensive school system (like the UK), most children might be streamed within the school (in the UK, 75% of participating children are streamed by ability, Table 1).

One of the advantages of the large PISA data set is that, for many countries, we have sufficient data to just apply the analysis on children who are neither streamed through school admission or within the school. We tested to what degree class size and performance are related for children in schools that are not streamed at all (i.e., schools that do not admit or sort children based on ability). In some countries, few students were in such a school; to ensure we had sufficient numbers of children in a variety of class sizes, we only included the 26 countries that had at least a country total of at least 1000 participating students in the type of non-streamed schools. In these 26 countries, the correlation between performance and class size in non-streamed schools (while controlled for socioeconomic status using partial correlations) ranged from r=-.026 in Brazil to r=.436 in France (Table 1). Of these countries, 19 (or 73%) countries again showed a statistically significant positive correlation ranging between r=.074 in Qatar and r=.436 in France.

DISCUSSION

Our analysis of the 2012 PISA data shows that there is a positive relationship between class size and performance in reading comprehension in the majority of countries. Except for a very small effect in Kazakhstan, we found no countries where there is a clear positive benefit of sitting in a smaller class. Importantly, we found the same effect even when only taking into account children who attend schools that neither select nor group students by ability.

Implications of our findings

The main implication of our data analysis is that there is no strong evidence to believe that smaller classes are beneficial to student attainment (at least, for 15-year old students without special needs). Of course, it leaves open the question of whether performance could be raised by increasing class size. This is a key question, given that educational policy makers might conclude from our results that larger classes directly cause higher scores in, at least, language learning. That conclusion would *not* be warranted because our study is correlational, and correlation does *not* imply causation. In order to answer this question further, the reasons for the positive effects of larger classes need to be better understood. Some authors have suggested ways to improve performance in larger classes (Benbow, Mizrachi, Oliver, & Said-Moshiro, 2007; Blatchford, Goldstein, & Mortimore, 1998; Carter, Cushing, & Kennedy, 2008; Heiney, 2010; Henderson & Buising, 2000; Mintah, 2014). Unfortunately, though, there are not many studies that address how larger classes can be beneficial (Blatchford, Bassett & Brown, 2011; Hattie, 2005). One given reason for the effectiveness of larger classes is that many schools base admissions on ability or stream children by ability within schools (Maasoumi et. al., 2003; Mosteller et. al., 1996; Wößmann, 2003b, 2005). Yet, streaming cannot explain why we observed the effect in the majority of countries when only analysing data from children who are not being sorted by ability at all. Another reason for better performance in larger classes is that they offer more opportunities to learn from peers (Borland, Howsen, & Trawick, 2005 cited in Kornfeld, 2010; Dobbelsteen et. al., 2002). We speculate that there might also be an indirect effect of the approaches needed to deal with larger classes. For example, it might be case that larger classes require a different form of discipline, which might lead to less disruption in class which, in turn, leads to better performance. Such complex hypothetical causal pathways are difficult to prove and require more detailed studies.

Why our findings deviate from studies indicating benefits of smaller classes

In the introduction, we listed theoretical work relevant to the relationship between class size and educational performance and achievement. Most of this work pointed at the positive effects of smaller classes on academic achievement (e.g., Breton, 2014; Cho et. al., 2012; Finn & Achilles, 1999; Finn et. al, 2005; Fredriksson et. al, 2013; Jakubowski & Sakowski, 2006; Jepsen & Rivkin, 2009; Nye et. al., 1999; Tienken & Achilles, 2006). Relevant to our current work focusing on reading skills, it is interesting that positive effects of smaller classes have been reported to be larger in reading (the subject we focused on) than in mathematics (e.g., Camacho, 2006). Our findings raise the question: how is it possible that different studies come to quite different conclusions about the benefits of smaller or larger classes? Answering this question will help to develop a refined understanding of the relationship between class size and academic achievement.

In the following, we will focus on two factors we believe can explain part of the contrast between our study and other work showing benefits of smaller classes. In short, these factors are related to the studied children as well as to how benefits of smaller classes are measured.

The first factor is related to which children have been studied. Our study was exclusively carried out with 15 and 16 year olds. At this age group, children have already developed relatively high reading skills, and children are typically better able to study more independently than is the case at younger ages. Therefore, we believe that it would be

unreasonable to extend our findings to primary school children in which benefits of smaller classes have been found (e.g., Finn & Achilles, 1999; Finn et. al. 2005; Finn et. al, 2001; Krueger, 1999; Mosteller, 1995; Nye et. al, 2000; Nye et. al., 1999). Apart from age groups, benefits of smaller classes have been shown for school children with special needs and from low income backgrounds (e.g., Bosworth, 2014; Ecalle, Magnan, & Gibert, 2006; Hanushek, 2002; Krassel & Heinesen, 2014; Molnar et.al., 1999; Mathis, 2016; Mosteller, 1995; Mosteller et.al, 1996; Zyngier, 2014). Again, we believe it would be unreasonable to extend our findings to schools with children with special needs, especially because these children will benefit from smaller classes.

The second factor that explains the difference between our conclusions and those of other studies are related to the outcomes measured. Our study focuses on a test measuring reading comprehension. Some studies analysing the benefits of small classes have focused on other outcomes, including long-term outcomes on college completion and earnings, as well as on non-cognitive skills (e.g., Chatty et. al., 2011; Dee and West, 2011; Harfitt & Tsui, 2015). Given the constraints of our data set, we could not include such variables.

In summary, theoretical advances in understanding the benefits of smaller classes needs to be put into the context on which age groups are studied, whether special needs students are included, and what incomes are being considered.

Limitations of the current study

The main limitation of this study is that our data only apply to 15-year olds. It would be of great interest to carry out the same analysis with children in primary schools. Although the Progress in International Reading Literacy Study (PIRLS) could address this question, it does not collect class size data per child. Further, the PISA class size variable was collected for classes in the host language only, which limits our analyses to the subject of reading comprehension. Although, we cannot generalize our conclusions to other subjects (e.g., mathematics or science literacy), it should be noted that scores in reading comprehension, mathematics, and science literacy are highly correlated (i.e., a child doing well in reading comprehension also does well in the other subjects (Stoet & Geary, 2015), and indeed the class size variable we used is highly correlated with the average class size of the schools participating in PISA. Therefore, we believe that the pattern observed here likely also generalizes to the subjects, mathematics and science.

Another limitation of this study is that our findings, like many large scale educational studies, are correlational in nature (which precludes conclusions about causal pathways). Given the importance of the relationship between class size and cognitive performance, we hope that educational policy makers would be willing to invest in an experimental or longitudinal study, which can answer the causal relationship between class size and cognitive performance.

CONCLUSION

In summary, we found a positive relationship between class size and educational performance in the majority of countries participating in PISA, even when controlling for streaming and socio-economic status. This finding seems incompatible with the idea that class-size reduction can increase attainment, at least for typically developing children around 15 years old. Given the importance of evidence-based educational policies, it is

important to better understand the causal relationships between class-size and school achievement using experimental and longitudinal research approaches.

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Educational foundations in Trinidad and Tobago: Reformulating a Masters course and building a learning community

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The context of this study is a Masters course in educational foundations, adjusted from an overall theoretical format to one which places heavy emphasis on the social interaction of participants toward the building of a community of learning. In a learning community, situations arise which require of its members social competencies conducive to positive social interaction. Subsequent to the course re-format, a qualitative case study was undertaken to gather responses over two course offerings. Data were analysed from teacher-participants, lecturers and tutors, as well as from sections of an assignment. Teacher experiences reveal that success in building a learning community needs scaffolding through in-depth sensitization into what a learning community entails. The challenge to lecturers is to examine their commitment to an emphasis on community building rather than discrete disciplinary knowledge in the philosophy, psychology and sociology of education.

Keywords: social competencies; learning community; community building; participant experience.

INTRODUCTION

This research probed lecturers, tutors and students (teacher-participants) for their experiences of the Masters in Education (M. Ed) foundations course "Education and the Development of Social Competencies" under a new 2011 format geared to building a learning community. The course took place at a university in Trinidad and Tobago at its School of Education. The teacher-participants (enrolment of about 120 per year) were predominantly teachers and administrators in early childhood, primary and secondary schools.

Social competencies refer to capabilities (knowledge, skills, and attitudes/dispositions) that persons should possess in order to engage self and others in a positive manner. They resemble life-skills of the Health and Family Life Education Curriculum that "constitute

a platform for living in the Trinidad and Tobago society" (Trinidad and Tobago, Curriculum Planning and Development Division, 2009a, p. 12). As such, the course builds problem-solving capacity in relation to "critical dilemmas, conflicts and prominent controversies arising from social development" (The UWI, St. Augustine Campus, Faculty of Humanities and Education, Regulations and Syllabuses, 2012- 2013, p. 87). In the school setting, social competencies include effective communication skills, self-knowledge and a student-friendly disposition aligned with "essential learning outcomes" such as citizenship and personal development (Trinidad and Tobago, Curriculum Planning and Development Division, 2009b, p. 3). Given definitional variations among researchers, Rose-Krasnor (1997) considers as key: "effectiveness in interaction" (p. 119) with "flexibility" as appropriate to context (p. 129). Thus social competencies in teaching such as "willingness to cooperate" and "organizational ability" (Kanning, Böttcher & Herrmann, 2012, p. 146) have as their goal effective social interaction.

Dissatisfaction expressed by the teacher-participants who had experienced the course prompted us (lecturers on the course) to reformulate the course structure. We noted an enduring individualism on the part of teacher-participants and a persistent preference for an "academic" offering over one exploring "lived experiences" and affective capabilities. In rethinking the course, we maintained the content but placed more emphasis on practice, including unsupervised practice (Mitra, 2013), and we also altered the course assessment.

Following are quotes from a 2010 (Mohammed, 2011) evaluation of the course as it was originally formatted.

> Different lecturers had different expectations and it felt like three separate courses at times.
>
> The core content of the course is . . . very valuable to those in the teaching profession. However the presentation of the course was inconsistent.
>
> We are still a very exam and results-oriented society and students just want whatever info they need to pass the course.

The course content, therefore, was largely uncontested, but the comments called for improvements in approach.

In its original structure, the course included one overview and nine topic-specific lectures, tutorials, a wrap-up session and a final tutorial. Each of the three foundations disciplines––philosophy, psychology and sociology—had three lectures of one-and-a-half hour duration followed by a one-and-a-half hour break-out tutorial session. Assessments included a course-work assignment as an integrated essay (40%) and a final examination (60%). The separate elements of the course were linked by way of common themes (diversity, reducing prejudice and educational reform) as shown in Table 1.

On re-modelling, we maintained the overview lecture and the wrap-up session and final tutorial; however, instead of the nine lectures, we provided only three one-hour lectures––one for each discipline—followed by two-hour break-out tutorials and scheduled supervised and unsupervised tutorials. We based the tasks and activities on the course themes. Thus, the major innovations were two unsupervised tutorials, three online sessions, and enhanced group work.

Table 1 –Disciplinary Content of the Foundations Course

Foundation disciplines	Diversity	Reducing prejudice	Educational reform
Philosophy	Human cruelty Human rights	Democracy	Justification of schooling
Psychology	Traditional vs. reformed curriculum	Learning	Authentic assessment
Sociology	Postmodernism: Globalization vs. Nativism	Social-justice Prejudice	A curriculum for peace

The course assessment was set as: a group dramatic presentation, journals that reflect on various course activities, a written group assignment geared to the formulation of a plan for solving a given social problem (60%) and an examination (40%). The dramatic presentation as authentic assessment highlighted social competencies in real life scenarios (Wiggins, 1990).

LITERATURE REVIEW

Before delving into the main substance of the literature review, it is useful to consider how previous research influences the design of the course. In summary, given our post-colonial context in Trinidad and Tobago, the course adjustments embodied a transformatory/emancipatory, student-centred, competence-based approach to teaching geared to community-building. The ideas guiding our course re-design along with the wider theoretical backdrop provided by the literature review represent the main elements of the conceptual framework of this research.

Education in the 21st Century is evidenced by a shift in focus from the trainer and syllabus content to the student. In the student-centred approach, students are not passive information receptors (Feldman, 2000) but are engaged with the content and with their peers, thus becoming agents of their own development. This approach contrasts with the traditional approach followed in the post-colonial Trinidad and Tobago context, in which individualism, educational certification and competition at examinations are prized (Lochan, 2011) and top-down education administration and delivery modes of teaching abound (Bristol, 2012).

To transform such a "problematic social landscape", Hickling-Hudson (2004) recommends greater "collectivity and equity" (p. 293) to reverse systemic defects and to improve "the range of skills, competencies, values and other attributes" (p. 296). In this vein, post-revolutionary Cuba has achieved remarkable success in education, becoming a leading light to its Caribbean neighbours who share a past of colonial domination. Such progress for Cuba involved consistent governmental commitment embodied in policy and widespread citizen participation (Sabina, 2009).

Fostering social competencies and building social competencies in the Trinidad and Tobago context appears to us to be an ethical imperative and is inspired by a view of transformatory education toward liberation (Shor & Freire, 1987). The shift in outlook required in transformatory learning (Mezirow, 1998), though facilitated by involvement

in a learning community, does not come easily because prior socialization in an oppressive colonial planation ethos is deeply ingrained (Brathwaite, 1973).

According to Hesse and Manson (2005), "Learning communities are built on the premise that learning is a social endeavour and that quality learning is enhanced by quality relationships" (p. 32). The learning community involves faculty and students in the social construction of knowledge (Rinehart, 1999), small group discussion and collective activity (Leibold, Probst, & Gibbert, 2002). Our course structure, therefore, incorporated activities to facilitate greater interaction among participants and the integration of educational foundations insights (Gabelnick, MacGregor, Matthews, & Smith, 1990). We also expanded group work to include in-class and out-of-class project-based learning.

Such insights into social learning have roots in the early work of Lave (1988) and Lave and Wenger (1991) who coined the term *community of practice*. Communities of practice are "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2006, p. 1). Wenger stipulates three features of participants in communities of practice: seeking solutions, sharing knowledge and expression of a common vision (Meeker, 2009). Brown and Duguid (2000) emphasize the role that stories, situations, problems, and examples of successes and failures can play in helping persons bond with one another. Interaction for bonding and learning in an interactive manner, as a hallmark of a learning community, are embodied in our course. The course is structured in such a way as to offer teacher-participants the opportunity to learn informally from their peers, who teach at different types of schools, and to collaborate in small groups for task completion in a "transformative pedagogy" (Snowden, 2004).

The idea of building community through conflict resolution, collaboration, problem solving and arriving at consensus (Eichler, 2007) is applicable in a university context (Salas Velasco, 2014), though challenges accompany the shift from the lecture as the dominant approach to teaching to activities geared toward competence-based group learning, particularly in transitioning from set university procedures geared to individualized assessment focused on content. Change also "demands more resources, smaller groups, more instructors [and] is indeed less cost-effective" (Salas Velasco, 2014, p. 521). At present, there is a scenario of cost-cutting measures in our university, which is influencing the hiring of tutors and lecturers. So, apart from the change in approach to teaching and learning, economic pressures result in workload changes which circumscribe progressive adjustments, such as reducing the student-to-tutor ratio. Overcoming such obstacles in university settings does, however, "play a key role in competence development" (Salas Velasco, 2014, p. 503).

Group work, such as the pooling of information and resources among members of a group to respond to a given task (Edmunds & Brown, 2010), has positive benefits because students can gain new understanding by challenging and defending ideas, developing leadership, team-work and strengthening communication skills in a supportive learning environment (Florez & McCaslin, 2008).

Group work is not without its pitfalls and can occasion disagreement, disorganization, lack of commitment (Pauli, Mohiyeddini, Bray, Michie, & Street, 2008) and participation. Interaction can be time consuming, drift onto off-task conversation and not progress beyond "cooperation" to "collaboration". Cooperation as "a protocol that allows you not

to get in each other's way" (Nelson, 2008) is still not a sufficient condition for the *collaboration* that is intrinsic to effective group dynamics: "[C]ooperation can be achieved if all participants do their assigned parts separately . . . collaboration by contrast implies direct interaction among individuals . . . and involves negotiations, discussions and accommodating others' perspectives" (Kozar, 2010, p. 17). The degree of social engagement marking the operations of the two processes renders collaboration as more relevant to the development of social competencies.

To encourage collaboration, our course opens with a segment on group-dynamics in the quest for "the amplification you get by connecting up a bunch of human beings who . . . communicate on multiple different levels, verbally, in writing, in feeling, in acting, in pictures" (Nelson, 2008).

Assessing social competencies requires multiple and varied methods in addition to the classroom exam: "Measures of simulated performance . . . such as role-plays . . . can assess areas of knowledge, values, and skills. Within a given context, multiple items or observations are preferable" (Drisco, 2014, pp. 419, 420). In our course, we use multiple forms of assessment. The keeping of journals (both individual journals and a group journal) develops reflexive skills. The first two assignments (the dramatic presentation and the formulation of a plan for solving a given social problem), based on real life issues, are group assignments requiring planning, brain-storming, consensus building and the integration of theory and practice.

While observation and critique of teacher-participants in their real life settings would be ideal (Drisco, 2014, p. 423), time constraints determine that we opt for simulated scenarios and projects (evaluated by both tutors and by teacher-participant peers). The identification and assessment of social competencies are facilitated by way of rubrics. Table 2 is a section of the rubric which requires students to formulate a plan for reducing bullying:

Table 2: Rubric for assessment of plan to reduce bullying

Item	15-11 marks	10-6 marks	5-0 marks
(d)(i)) Formulate a plan or programme which may effectively reduce bullying and prejudice at the level of the classroom or school.	The plan is clearly formulated in terms of its aims & objectives, the scope of the project, and the intervention.	The plan is clearly formulated but is inadequate in relation to one of the following: its aims & objectives, the scope of the project; and the intervention.	The plan is not so clearly formulated and is inadequate in relation to more than one of the following: its aims & objectives, the scope of the project; and the intervention.

The rubric numerically rewards higher level cognitive and affective learning outcomes (Anderson & Krathwohl, 2001; Krathwohl, Bloom, & Masia, 1964). A possible self-critique lies in our neglecting to prioritize the competencies themselves and reward with regard to "effective social interaction." We are also considering isolating basic social competencies as in virtue theory, in which fundamental cardinal virtues are identified (courage, temperance, prudence, and justice) and considered as the basis for living a virtuous life. Borrowing from the virtue approach can provide an important supplement to an ethical approach that focusses on right action whether in terms of duty or utility (Rachels, 1998).

METHODOLOGY

This is a qualitative case study exploring perceptions arising from experiences of a bounded group of people. In a qualitative enquiry, meaning-making is explicitly targeted; meanings are mediated "through language and action", which are assessed (Dey, 1993, p. 11). Understanding the meanings participants attribute to their experiences is a prime pursuit (Dunn, 2010).

This research approach is especially relevant to lecturers, tutors and students of this course who have been socialized in a post-colonial context with associated ways of conceptualizing learning. The transformative shift which incorporates learning in community and utilizing small groups is attended by tensions, conflicts and ambiguities that can most appropriately be captured and interpreted using qualitative methods.

Understanding the prior socialized views which people bring into the learning environment is critical when introducing new learnings and activities. By soliciting the perceptions of participants, we obtained data for revealing the meaning-making processes of learners involved in the remade course with its new structure of group activities and varied formats of assignments.

The research question is: What were the perceptions of students and lecturers arising out of their experiences at building community traced over the years 2011 and 2012 in reference to the course: Education and the Development of Social Competencies?

Data collection

The sample comprised three lecturers, three tutors and students (teacher-participants) of the course (the entire cohort in 2011 and 2012 numbered 240 students). We employed a variety of data gathering methods:

- Open-ended, written reflections on the course by lecturers and tutors about their experiences of the change in approach (six staff reflections).
- An e-mail questionnaire (see Table 3) sent to students seeking open-ended reflections on various aspects of the course (16 responses out of 240 students).

Table 3: Student questionnaire

(a)	Given your experience of the course, what would you say were some of the aims/ intentions of your lecturers?
(b)	In your estimation, were these aims realized? If so, give some details. If not, or only partly so, what were the possible factors or circumstances responsible?
(c)	What did you like about the course? What did you dislike?
(d)	Do you see this course impacting on you as an individual and/or as a teacher? If not, why not? If so, how?
(e)	How best do you think this course could have been organized and delivered, given that it is only 12 weeks long (one semester)?

- Peer evaluations (Table 4) by e-mail. Students were asked to individually grade their colleagues (58 students were randomly selected from the 2011 student cohort and 50 from the 2012 cohort – a total of 108 peer evaluations).

Table 4 – Peer evaluation

Peer Evaluation

Name:			
Rate on a scale of 1 (lowest) to 10 (highest)			
Member name (including yourself)	Participated in discussions	Contributed to group presentation 1	Contributed to group paper

- Group evaluations (Table 5) by e-mail. Individual students recorded their experiences—using narratives—of having worked with fellow group members during the course (50 students were randomly selected from each of the 2011 and 2012 cohorts for analysis; a total of 100).

Table 5 – Group evaluation

Group Evaluation
Write a short paragraph assessing the process of your group: What were the challenges? What were the joys? What did you learn about your group members? What did you learn about yourself?

- Part of the 2012 assignment required students to reflect as a group and to submit a written response about their experiences of having worked together (13 group reports).

Data analysis

Data gathered were in the form of written documents, submitted by the students and the lecturers/tutors. We employed constant comparison (Glasser & Strauss, 1967) procedures to analyse the data. We used open and axial coding (Strauss & Corbin, 1998) to organize the data into themes with codes and corresponding extracts (see Table 6).

We achieved the trustworthiness criteria in the following ways: the lecturers and tutors were involved with this course for many years and have been reflecting on the issues; the teacher-participants responded in a variety of formats and had adequate time to think about their submissions; and all researchers met periodically to discuss the analysis trends and to give critical feedback, thus enriching the research product through different perspectives.

Table 6: Data coding/reduction-excerpt from the analysis of "Group evaluation"

Codes/themes	#	Statements
Difficulties/challenges with group-work		
a. Logistics of meeting	50	*The main challenge was the synchronizing of time and deadlines of 7 professionals who work full-time.*

b.	Members who lack communication skills, did not participate, who were authoritarian	5	*Slackers, free loaders, bullies.*
c.	The 2nd Assignment uncovered challenges – some did not work, some only focused on their parts	15	*'the workload was on the devotees'; 'some persons felt the end of the assigned task meant the end of the assignment'*
General experience of being in the group			
a.	Joy, fun, laughter, camaraderie	21	*'a class to remember'*
b.	Collaboration	11	*A good feeling when all co-operated to accomplish tasks*
c.	Assignment 1: everybody fell easily into the tasks; all-round participation and enjoyment	21	*The first assignment was wonderful and everybody contributed unreservedly.*

PRESENTATION OF DATA

Lecturers' perspectives: "Change is good but uncomfortable"

Lecturers and tutors were unanimous in approving the new practical course approach. They observed that students were more actively engaged than in the past, enjoying the shift in focus to "doing," which embodied the very concepts and knowledge that the course was designed to transmit. Lecturers perceived that expanding the small group activity was a definite strength.

While many students responded well, the extent to which they related their new knowledge and their emotional reactions to the course intent was not always clear because few student-reflections exhibited explicit connections. Moreover, the reduction in plenary lectures and increase in tutorials and group work did not seem to augur well for developing a sound theoretical base of the three important sub-disciplines of education (philosophy, sociology and psychology). The demands that group work made on individuals to accomplish assigned tasks seemed to be so all-absorbing that the larger context of course content and the idea that they were being confronted with situations as opportunities to develop their own social competencies faded into the background. Lecturers shared their views:

> Whilst the students say that the course is enjoyable, particularly the dramatic production . . . they should be more confident about the nature of *social competencies*.

> Working in groups . . . is both enjoyable and stressful, so that the process of group interactions becomes the dominant "task" . . . the rigors of the group process might be too distracting . . . details about content and disciplinary perspectives do not take center-stage.

So, there is the uncomfortable feeling that, whilst this approach fosters deeper engagement on the part of students, it is not as efficient as the previous approach in ensuring that they are exposed to a range of concepts, knowledge and research in the three disciplines.

This issue of content has implications for the disciplinarity/interdisciplinarity divide. Lecturers acknowledged that there were now three disciplinary lectures, yet the tasks, interactions, assignments, and a major examination question called for interdisciplinary connections. Further, some students were unable to discern whether they were delving into psychology, philosophy or sociology. These results reveal the need to transition the course further along the lines of interdisciplinarity; this is likely to cause discomfort to lecturers who are not trained in interdisciplinarity but are subject specialists.

Students' perspectives: "It was a bitter sweet experience"

There was overlap in the way teacher-participants responded to the e-mail questionnaire, the group evaluation and the 2012 assignment. The following interwoven narrative uses swimming as a metaphor for their curriculum experiences.

Students, accustomed to the traditional paradigm, even with modifications to enable interactions and technologies to provide stimulus and variety in learning, found the "idea" of change welcome. At the same time, the prospect of continuous group-work was daunting. Thrown in at the deep end, they protested:

> [T]o interact with new people of different ages and genders and backgrounds . . . stressed me out because I . . . wanted to be with my friends . . . Let people choose their own groups and the quality of work may improve!

We perceive that students cringe at the thought of having to build community—akin to how swim-novices feel when they are required to "jump in". This suggests that lecturers need to be more sensitive to this "fear of water" and provide minimally challenging pre-activities to begin to diminish the "us versus them" syndrome.

Initially, there were many positive stories as some persons found themselves "swimming" through their own natural abilities and were fortunate to be in a supportive group:

> [D]rama was not my strength. But the group pulled me along . . . the group emanated a positive attitude of which all members were able to feed and resuscitate themselves.

This positive experience could have been facilitated by a willing and adventurous deposition among members in spite of the novel course character.

The long haul, however, proved challenging. After a few "laps of the pool," it became clear that there were difficulties:

> [T]he workload was on the devotees; the saying "a promise is a comfort to a fool" proved applicable as a few members still showed little commitment . . . "just breathe" and things will work out.

For the most part they did not relay these issues to the tutors but preferred to work on them themselves, showing a willingness to commit to extra practice so that the group could compete with a high level of mastery. We see here the beginnings of a communal ethos—though in a delicate state of becoming. The skill-set that seemed to need the most work was in the affective domain; as one participant opined: "I had more patience than I sometimes give myself credit for; I quarrelled with no one, which shocked me."

There were instances when students wanted to send out a call for help but did not:

> This particular experience raised some questions that I'm not sure I have the answers to: How do you know when someone is actually giving of their best? What do you do if their best just isn't cutting it—do you give them a *bligh* [excuse them] and let it slide, or do you take the hardline? A part of me says: "Keep the focus on the bottom line. If the requirement is not being met . . . tough. Give them the axe"! . . . However there is another part of my psyche . . . that says I'm supposed to be a bit more understanding and accommodating.

These reflections show that a point is reached at which members need to find their second wind, perhaps by seeking outside help to resolve issues and tutors should be mindful of this.

Groups reported various levels of success. A few began well and, though they may have encountered some difficulties, were able to stay the course. For many, however, the prospect of drowning appeared imminent:

> I really did not see . . . the social competencies . . . coming out. I saw group bullies in two forms the "egotistic" and the very "laidback". I have seen the usefulness of social competencies in its absence.

> I hate it when people do not step up and do what they are supposed to do.

> Some of the members of my group were simply looking for the easy way out. Although they did not want to do the work, they somehow miraculously expect to get good marks. I was never a fan of group work and this has not changed.

> I was disappointed with the group. The leader did not consider the opinions of others. Two members became obnoxious and overbearing.

Even amidst such disappointment, largely directed at other members, there were comments such as:

> A class to remember.

> A good feeling when all co-operated to accomplish tasks.

> We shared a symbiotic relationship which in itself produced a synergistic relationship.

> The first assignment was wonderful and everybody contributed unreservedly.

> We had to be as diplomatic as possible in trying to have things not come to a head.

> When the time comes it is right to back down and leave things alone for the sake of achieving an aim.

> We practiced democracy so each person had an equal voice in all decisions.

> We innovatively had cyber meetings and so were able to get tasks done; and, I made new friends.

These utterances from members of the group above were apt indications of intended course outcomes. An encouraging sign was the collaboration using face-to-face and by way of available technology.

One interesting finding by way of the "Peer assessment" pertained to the social competency of self-reflection, in that students needed to become more aware of their own limitations. One lecturer commented:

> In the few cases where several members of a group seemed to identify a loafer in the group, the loafer did not score themselves any lower than any other members. What does this say for self-discovery, being true to self and developing the social competency of honesty and taking responsibility for your actions?

In this case the loafer did not recognize him/herself as shirking responsibility.

Emerging from the above accounts, the possibility exists that even amongst accomplished swimmers some may not be as competent in the butterfly or the breaststroke; our students were showing us that they did possess some level of capability, proficiency and skill in working with others, but they were not trained in the complex art of building community. Discomfort rose when they felt a sense of being adrift in not knowing how to respond to certain situations.

DISCUSSION

Given the post-colonial context of Trinidad and Tobago, with its mixture of democratic ideals and dehumanizing retentions from its colonial past, we felt it was timely to sound out participants as to their experiences in the context of a course which we consider to be transformatory and emancipatory. Findings indicate a story of both openness to change and significant resistance, with lessons for enhancing learning experiences for future cohorts.

One dilemma did emerge: how to build community, deepen the experience of working in groups and, at the same time, ensure that students are sufficiently exposed to the major concepts and knowledge in each of the foundation disciplines? The latter was a strength of the original format but, in the new format, only the most motivated students read and assessed the notes and references that were available on the online learning platform and were able to respond to questions. Our students are full-time teachers who have other courses to master per semester so the pressure of work and course demands may be a factor affecting the quality of effort given to unsupervised activities.

While some teacher-participants appreciated the online sessions (these reduce the need to commute to campus) and working in groups (with and without the tutor), they found it difficult to see the blended learning course on par with other courses:

> This course . . . was not challenging enough for students at the Masters level . . . seemed to be revisiting things I learnt as a child such as respect and tolerance . . . students used to make jokes about this course saying it was a "make up course" because of the lack of content.

The issue turns on content and what students are accustomed to, hence their unconscious biases seem to favour plenary lectures with a heavy dose of abstract knowledge. The unconventional teaching and learning arrangements in this course coupled with a strong focus on affective issues have had the unfortunate result of some students not taking it seriously. Such an attitude may be a feature of our deeply ingrained post-colonial mind-

set, so planners of the course need to recognize that we are engaged in a re-socialization process with the added dimensions that such entails.

Socialization does not only affect teacher-participants but also lecturers, as evidenced by the "territorial" concern that each discipline was not being adequately taught; back to the notion of disparate disciplines with strong boundaries. The focus on building community is sufficiently different from previous experiences of teaching educational foundations, posing a challenge to lecturers involved as to interdisciplinarity. While that again brings up the issue of having sufficient scope to expose students to a wide array of disciplinary concepts, this has to be balanced against the strengths of an interdisciplinary curriculum which requires that subject specialists encounter others from different disciplines in the guise of a learning community.

It also occurred to us that the attempts by lecturers in one course at a School of Education designed "to build community" amongst students may not be as successful as it can be because the traditional teacher-centred paradigm exists in all other courses. Even though other courses may employ periodic group-work, highly interactive sessions, integrating technology with instruction and many different forms of formative and authentic assessment (Petrina, 2007), students are rarely required to rely on others for their knowledge and experience to complete tasks. Perhaps embracing student-centeredness may well only be taken seriously when embodied as policy and implemented at the levels of the learning organization and not in a piecemeal fashion.

Even without a "whole-school as learning community" approach, students are, nevertheless, provided with the opportunity for deep reflection throughout the course. Some individuals commented on the anti-discriminatory people-skills that the course intended for them to learn:

> Having been a teacher for 21 years I have realized that having these important competencies helps build meaningful relationships with colleagues, parents and students that can have lifelong positive consequences . . . it paves the way for peace within families, communities and society as a whole.

CONCLUSION

Both lecturers and students were strained by the demands of building community because the traditional teacher-centred paradigm haunts present perspectives. With this in mind, one innovation we can introduce is a more in-depth sensitization to the goals and challenges of building community in a post-colonial society, integrated with explicit attention to the nature and role of social competencies. Success with this venture will be influenced by the larger context and, thus, advocacy could be undertaken toward refashioning the School of Education more along the lines of a learning community. At the very least, the foundations lecturers recognize that the call to interdiscipinarity is a crucial one for which our course provides an immediate platform.

Our research also clarified the need to explore what re-socialization would mean for greater success in transforming present praxis for the purposes of building community. This brings us to the question of whether one semester is enough. The stages of community formation (Grossman, Wineburg, & Woolworth, 2001) occurring in quickened sequence may inevitably result in weak commitment to the group as the focus

of learning. In this respect Guldberg and Pilkington (2006) encourage concerted attention to the design and quality of mentoring.

Finally, matters of tightening assessment continue to be a work in progress. Explicit competencies, such as respect for diversity and the skill of advocacy, are already targeted course outcomes, yet it is difficult in every case to predict the actual shape of every social competency in a concrete fashion because social competencies are entities situated in context, with flexibility an essential characteristic (Rose-Krasnor, 1997). Nevertheless, to be further explored—especially given present time and financial constraints—is a rationale for prioritizing social competencies for teachers with an accompanying rubric so that concerted attention can be given to selecting, from among the pearls, those of greater price.

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Internationalization at a German University: The purpose and paradoxes of English Language

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One significant phenomenon regarding the internationalization of higher education around the world is the wider use of English as the "lingua franca" for research, scientific study, and graduate education. Germany has increased its English taught Master's programs by 13 percent since 2011, second behind the Netherlands, with a total of 733 Master's programs taught in English. The University of Hamburg in Hamburg, Germany, currently offers 18 English Master's programs, 10 combined German/English Master's programs, and one English doctoral program. This paper provides findings from interviews of faculty concerning the English programs. Three main themes emerged from the interviews: 1) faculty's ambivalence concerning the use of English instead of German in graduate programs, 2) administration's recent emphasis on the importance of faculty publishing in English for promotion and tenure, and 3) faculty interest in further increasing English programs in their graduate programs.

Keywords: internationalization; higher education; German graduate programs; English in higher education

INTRODUCTION

Internationalization efforts at universities worldwide are increasing at a rapid rate (Horta, 2009; Van der Wende, 2007). The reasons for this quick rise in internationalization of higher education include: 1) the rapid movement of information across borders (Bartell, 2003), 2) the want of cross-border resources (Bartell, 2003), 3) global competition (Bartell, 2003), and 4) cross border cooperation due to the merging of markets across borders caused by globalization (Enders, 2004). An outcome of such internationalization of higher education is the wider use of English as the "lingua franca" for research, scientific study, and graduate education (Altbach & Teichler, 2001; Horta, 2009; Van der Wende, 2007).

A country that is increasing its use of English in the teaching of its Masters courses is Germany (Brenn-White & Faethe, 2013), and, thereby, increasing the country's number of international graduate students. As recently as 2005, Germany held a reserved view on the use of English in graduate education because of a desire to retain its German language cultural heritage (Luijten-Lub, Van der Wende, & Huissen, 2005). Additionally, in 2010, Chancellor Angela Merkel echoed a German jeremiad, repeated since Chancellor Helmut Schmidt, that Germany was not a land of immigration and that integration into German society via a total immersion of the German language in culture was the priority

(Williams, 2014). However, because of the advent of a loosening of integration and citizenship laws (Williams, 2014), a demand by international graduate students for quality higher education research (Luijten-Lub et al., 2005), and a population decline (Daley & Kulish, 2013), Germany has increased the number of English programs in its Masters programs by 42 percent since 2011 (Brenn-White & Faethe, 2013). Today, because of the more lenient laws, Germany is a country of immigration ranking second behind the US (Webb, 2014).

The University of Hamburg in Hamburg, is one of many universities in Germany that is delivering Masters programs in English. To determine why the university developed English-taught Masters and doctoral programs, a study was undertaken, with the research questions being:

1) How do faculty in the Masters and doctoral programs that use English for instruction perceive the use of English as opposed to using German in the programs at the University of Hamburg?
2) What is the specific goal of having these programs in English at the University of Hamburg? and
3) What is the relationship between the German state and the University of Hamburg regarding the programs that use English for instruction?

This paper provides a review of the literature demonstrating that Germany's "new" nationalism, or loosening of its citizenship and immigration laws could be impacting the English taught Masters and doctoral programs. The methods used to answer the research questions and findings from the research are described below.

REVIEW OF THE LITERATURE:

Reasons for internationalization of Universities

Bartell (2003, p. 51) identifies three reasons for the internationalization of universities worldwide:

1) Since information is moving at such a high rate between borders, higher education is in a position to mediate this information by providing for an "understanding through personal, cross-cultural, international, and shared experiences."

2) Previously isolated communities are now aware of democratization and modernization and are demanding resources, recognition, independence, and universities are in a position to educate communities about each other.

3) Because of economic and political interdependence, such as free trade agreements and the standardization of academic norms, such as the Bologna Process in Europe, universities worldwide are feeling the impact of not only competition from other universities but also a reliance on shared partnerships and exchanges.

Enders (2004) describes how the contemporary university is a reflection of the specific nation-state that created it. However, Enders sees internationalization and globalization putting pressure on nations and, thus, on universities. He notes that internationalization refers to the "processes of greater cooperation between states, and consequently, to activities which take place across state borders" (p. 367). Globalization is seen as a "processes of increasing interdependence, and ultimately convergence of economies, and

to the liberali[s]ation of trade and markets" (p. 367). One such specific pressure on universities and the state related to both internationalization and globalization is the use of English as the language of research and communication. Similarly, Healy (2008) describes internationalization of universities as "driven by innovations in information and communication technologies and mass air travel and underpinned by the growing dominance of English as the common language of business, politics, and science" (p. 334).

The role of English in the internationalization of Universities

Altbach and Teichler (2001) note that universities worldwide are expanding their internationalization efforts because of:

1) a common academic model,
2) an increasingly global marketplaces for students and staff,
3) the use of English for research and teaching,
4) an increase in distance learning and the use of the Internet for research and teaching,
5) universities partnering with universities in other countries, and
6) the "harmonization" of degrees, curriculum, etc. (p. 6).

Horta (2009) argues that top European research universities' internationalization efforts involve recruiting more international students instead of undergraduates to maintain their research capacity, "scientific performance, and institutional reputation" (p. 390). He adds that European universities are also increasing their English speaking international faculty since English is the "lingua franca" for research. English is so important at these research universities that publishing in English in international journals and books "surpasses" non-English journals or books (p. 392).

Van der Wende (2007) similarly states that as more Organization of Economic Cooperation and Development states (OECD) continue to internationalize their higher education, English will be the "lingua franca" of undergraduate instruction as well as research and postgraduate studies regardless of the other languages spoken in those states (p. 276–7).

In a recent study by the Institute of International Education, European countries are expanding the number of programs they teach in English to reach a wider worldwide student body (Brenn-White & Faethe, 2013, p. 4). Currently, there are 6,407 programs taught in English in Europe, which represent a 38 percent increase since 2011 (Brenn-White & Faethe, 2013, p. 4). As of June 2013, there were 5,258 Masters programs solely taught in English, which is an increase of 42 percent since 2011 (Brenn-White & Faethe, 2013, p. 4). Germany has increased its English-taught Master's programs by 13 percent since 2011 and is second behind the Netherlands with a total of 733 Masters programs taught in English (Brenn-White & Faethe, 2013, p. 6). The most popular Masters fields taught in English include: business, economics, engineering, technology, and social sciences (p. 9).

According to Luijten-Lub et al. (2005), doctoral studies in Germany "lack structure and transparency" and is "seen as a disadvantage in international competition" (p. 150). Thus, it has been, in recent years, that Germany is increasing more English language programs at the Masters and doctoral levels to attract a worldwide student audience, especially because of American influence on business, engineering, technology, and research.

Ironically, Luijten-Lub et al. (2005) stated that Germany held a reserved response towards increasing more English-taught college programs because they feared "a loss of cultural heritage" (p. 160). However, Germany's university programs taught in English have increased substantially today (Brenn-White & Faethe, 2013).

The State, German identity, and the new nationalism

Since 1945, Germany has struggled with issues concerning immigrants, especially Turkish guest workers and Turkish Germans, such as requiring them to learn German proficiently and to integrate fully into German society and "become" German (Geertz Gonzalez, 2012). So it is ironic that German universities, which are representatives of the state of Germany, are now increasing their English programs in order to attract international students from abroad. For example, in 2010, Merkel declared that "*Der Ansatz für Multikulti ist gescheitert, absolut gescheitert*" (The attempt at multiculturalism has failed, absolutely failed) in Germany (Evans, 2010). She was remarking that immigrants in Germany were not integrating into Germany society. This German jeremiad about the lack of immigrants integrating into German society is not new. In fact, it has been repeated often since the 1980s. In 1981, then Chancellor Schmidt declared: "The Federal Republic should not and will not be a country of immigration" (Williams, 2014, p. 57). In the 90s, then Chancellor Helmut Kohl also declared: "The Federal Republic of Germany is not a country of immigration" (Williams, 2014, p. 57).

Nevertheless, according to Williams (2014), Germany's perceptions about immigrants and integration changed with the passing of the new *Nationality Act* on January 1, 2000. The *Nationality Act* reduced the residency requirement from 15 to 8 years and allowed "children of foreigners with permanent settlement status to be born with German nationality" (Williams, 2014, p. 59). Prior to this, only those born in Germany under the "just soli" or right of soil law, and with at least one German parent under "jus sanguinis" or right of blood law, were allowed German citizenship. Thus, Germany began to loosen its once restrictive citizenship policies. On July 2004, the *Immigration Ac*t (*Auswärtiges Amt*) was passed, which introduced: a basic language test for non-German family members, a one-year reduction of residency if an integration course was taken, and the creation of the Federal Agency of Migration and Refugees (Williams, 2014, p. 61; Federal Foreign Office, 2017).

After the passing of the *Immigration Act*, politicians began to agree that Germany was indeed a land of immigration (Williams, 2014, p. 61). Although politicians now and then continue to decry the supposed lack of integration of immigrants, Williams states that "public opinion has grown steadily more welcoming towards immigration and more positive in the appraisal of immigrants' contributions to German culture and society" (p. 71). Additionally, the German public has chastised outcries of outright racism. In 2010, Thilo Sarrazin, former member of the Executive Board for Deutsche Bundesbank, published a book titled: *Deutschland schafft sich ab* (*Germany is doing away with itself*), lamenting that multiculturalism and the integration of immigrants in Germany has failed. Sarrazin was forced to step down because of the public's rage that his book was offensive, which Williams (2014) notes demonstrates that the "German public has moved slowly left" (p. 73).

Overall, Williams (2014) believes that, because of the new policies and discursive practices in Germany regarding immigrants and integration, both elites and the public appear "to be growing more liberal and more stable, and the country appears to be

establishing a new discursive norm that is more inclusive and exhibits more elements of reciprocal integration" (p. 73). And now that Germany is second behind the US in terms of number of migrants (Webb, 2014), it appears that Germany is incorporating a new nationalism no longer based on restrictive policies but based on the idea that they are indeed an immigrant nation.

It is also a reality that Germany is undergoing a large population decline; according to a recent census, Germany's population has decreased by 1.5 million since 2013 (Daley & Kulish, 2013). By 2060, the country could shrink from a current population of 82 million to about 66 million. Thus, to prevent a future labour shortage, Germany has to "attract immigrants and make them feel welcome enough to make a life" there (Daley & Kulish, 2013).

The German university case

The University of Hamburg is a large university in Hamburg, Germany. It was founded in 1919 and has a total of 44,800 students (40,000 students at home and 4,800 students abroad) (University of Hamburg, *University history*, 2013). The university has 18 departments, seven senate institutions (equivalent to American research centres), eight interdisciplinary degree programs, and four joint university programs. The university campus is spread throughout the centre of the city of Hamburg and throughout other parts of the city.

In 2010-2011, the University of Hamburg underwent an internationalization audit and, after a successful review, was awarded an internationalization certificate by the German Rector's Conference (HRK), (University of Hamburg, *International audit*, 2013). The HRK is a voluntary association of state and state-recognized universities in Germany established in 1949 (German Rectors' Conference, 2013). It serves as the "political and public voice" of German universities and "provides a forum for the process of forming joint policies and practice." Currently, the University of Hamburg offers 18 English Master's programs, 10 combined German/English Master's programs, and one doctoral program in English (University of Hamburg, *Degree Programs*, 2013).

METHODS: CASE STUDY INQUIRY

The research questions for this study are as stated in the introduction above. To answer these questions, a case study methodology was implemented. Creswell (2013) states

> [C]ase study research is a qualitative approach in which the investigator explores real-life, contemporary bounded system *(case)* or multiple bounded systems (cases) over time, through detailed, in-depth collection involving ***multiple sources of information*** (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a ***case description*** and ***case themes.*** (p. 97).

A case may be "an individual, a small group, an organization, or a partnership" (p. 98). Additionally, a case study focuses on "contemporary events" (Yin, 2009, p. 11). For this research, the University of Hamburg is the specific case. The specific issues examined for this case study are the reasons for the recent increase of Masters and doctoral programs taught in English at the University of Hamburg. Therefore, this was a "single, instrumental case study" (Stake, 1995, p. 3), since the issues that were examined were looked at within only one bounded system: the University of Hamburg.

Case study data collection commenced in May 2014 and finished in September 2014. Yin (2009) describes six sources of evidence in case studies: documentation, archival records, interviews, direct observations, participant observation, and physical artefacts (p. 101). Documentation includes: letters, notes, emails, memoranda, agendas, meetings, minutes, administrative documents, formal studies or evaluations of the same case for this study, and news clippings and articles (p. 103). For this case, the documents used were those that refer directly to Masters and doctoral programs taught in English at the University of Hamburg. Yin (2009) states that "the most important use of documents is to corroborate and augment evidence from other sources" (p. 103).

Interviews are "one of the important sources of case study information" (Yin, 2009, p. 106). For this case study, in-depth interviews were undertaken in order to solicit from respondents "facts of the matter as well as their opinions about events" (Yin, 2009, p. 107). Four faculty who are involved in Masters and doctoral programs taught in English at the University of Hamburg were interviewed between 20 May 2014 and 11 June 2014 on campus. Six other faculty who are involved in Masters and doctoral programs in English were interviewed between 18 August 2014 and 10 September 2014 via SKYPE phone because they were unavailable for face-to-face interviews while I was in Hamburg, Germany. Interviews continued until saturation or until the same information was repeated among respondents (Creswell, 2013, p. 89). Appendix A provides the framework for interview questions for faculty. Since qualitative interviewing is "continuous," participants answers might lead to new inquiries and thus, questions were modified throughout the study when necessary (Rubin & Rubin, 1995, pp. 47–48).

A purposeful sampling of participants; that is, those with direct experience with the case, were interviewed for this study (Creswell, 2013, p. 155). Interviews were scheduled for 60 to 90 minutes: 60-minute interviews were for those participants who might not have enough time to do a longer interview; 90-minute interviews were for participants who could stay longer. Seidman (2006) suggests that participants be interviewed for 90 minutes, which is long enough "to make them feel they are being taken seriously" (p. 20). Since these respondents are involved with English programs, interviews were all conducted in English.

Member checking consisted of sending the participants a copy of the transcripts to confirm or edit their interviews (Creswell, 2013, p. 252). Finally, "rich, thick description" was utilized for this study since the researcher "describes in detail the participants or setting under study" because it "enables readers to transfer information to other settings and to determine whether the findings can be transferred" (p. 252).

FINDINGS

Themes revealed from an analysis of data include:

1. English vs. German academic graduate instruction: Faculty discussed their ambivalence towards using English for instruction over German;
2. English skills for faculty: Faculty discussed the importance of having English publications for promotion and the hiring of new faculty; and
3. English instruction in future courses: Faculty discussed the importance of expanding English instruction in graduate academic programs to attract international students as well as to provide their current students with adequate

English instruction so they are prepared to apply to international businesses within and outside of Germany.

English vs. German academic instruction

At the time of the interviews for this study in May 2014, there were 25 Masters programs taught either in English or a combination of English and German, and one doctoral program fully in English. One of these programs, the Masters of International Business Administration (MiBA) was about to cease and be subsumed under the Masters of International Business and Sustainability (MiBAS). According to Dr Henry, the new MiBAS program would be taught under an English track by faculty. Faculty in different programs within the Social Sciences at the University of Hamburg all agreed that English teaching in the Masters programs and one Ph.D. program were all-important and becoming commonplace because of their perception that English was now the language of scholarship and it was the most commonly understood language in the world. Thus, according to Dr Stuart, most of these faculty see the importance of teaching at least some courses in English in their Master's programs:

> Even now, there is no discussion of having English courses exclusively and no German courses anymore. One professor in one of our programs said "no" and that he wanted to teach in German for the Master's or certificate degree. He threatened to sue the Department for using English; maybe he would have had success with that, but he decided to leave the Department instead. There is no debate here that there should be at least some German courses though.

Similarly, Dr Pamela described how important it was to establish English as the teaching language for a Ph.D. program, which cooperated with other non-English and English speaking countries:

> So the discussion we had is that teaching in English is a good thing, but if we would do more programs, there is a Ph.D. program where we also want to attract more international students where we would do a mixture of German and English language courses to encourage people to go deeper into German language and culture so that they had the benefit of learning German and applying it and staying on in Germany so at least part of their Ph.D. was in German. Not sure if it works. Now I would go for a mixture of local languages and English. But we are partners with the Netherlands and there are more countries and more of a tradition in teaching in English. At the moment, using another language would not make any sense.

While Dr Pamela does detail that having a mixture of German and English or local languages with English at other institutions would benefit international students, the faculty decided that since other non-English speaking countries like the Netherlands had been using English in their programs for a while now that English would be the language used for their Ph.D. program. For most faculty, such as Dr Stuart and Dr Pamela at the University of Hamburg, English was chosen outright since it meant that they were aligning themselves with the language of scholarship and the university would attract more international students.

Nevertheless, administrators and faculty alike were more deeply engaged and concerned with how to incorporate and assess English taught graduate programs campus wide. For example, Dr Richard sees English taught graduate programs at the University as a "conundrum:"

> English is the language of communication today. Maybe, it is as important and useful, and practical, and productive as Latin was at some point. Why not have one language or standard to which to communicate? However, on the other hand, I feel it may also entail a loss of diversity of scholarship through different tongues and different discourses. People in French academia feel that they are being disadvantaged. French colleagues apologize at conferences by saying their English is bad. I think that it also applies to members in German academia. And yet, Germans are much more willing to give in and also it is much easier for them to give in.

Dr Richard sees not only practicality with English as the language of research communication today but he also the problems it brings, such as loss of scholarship in other languages. It is interesting that these German faculty see English for graduate studies and research as inevitable while simultaneously struggling with how to handle it within the University of Hamburg.

Likewise, Dr Stephanie, who serves on a campus wide committee that looks at internationalization efforts at the University of Hamburg, described one of the committee's recent discussions:

> We are discussing things such as the role of English at the university. For example, which graduate programs without any doubt must incorporate English with respect to internationalization. But is it an indicator of quality of teaching if it is offered in English? There is a lot of doubt about this question. What is the appropriate mission for this direction knowing that English is unavoidable, but on the other hand respecting the role of academic German.

Dr Stephanie's comments demonstrate that, while all the faculty for this study agreed that English was important and necessary—especially with a globalized world, assessment of English taught graduate programs at the University of Hamburg needed to be more rigorous and thoroughly looked at. She also mentions how important English should be regarding faculty publications and how these are aligned with internationalization. Some faculty stated that publishing in English was important for advancement at the University of Hamburg. Nevertheless, Dr Stephanie also criticized the overreliance on English instruction in graduate programs as proof of internationalization:

> Two former mayors and two other former politicians blame the university for not being innovative enough but they are not close to the University of Hamburg. The city of Hamburg is not supportive of cultural or scientific institutions because it is a city of merchants. They see cultural institutions in terms of investment. They have a narrow view of the value of academics or research; very narrow. That is very different from other universities I stayed in, like Göttingen where I taught before. They have a better relationship with the city. They see the university as the core development with the city. The University of Hamburg sees internationalization in simple ways with English courses and incoming international professors with English skills, which is too simple.

Thus, from an internal faculty perspective, English instruction at the University of Hamburg is conflicted. On the one hand, it is a positive development to increase the number of international students and elevate the academic reputation of the university, since English is the "language of scholarship," on the other hand, it is a simplistic way to offer proof of internationalization on campus. It also demonstrates that the state of Hamburg via politicians are also interested in expanding internationalizing efforts beyond English instruction on campus to encompass a more international programming beyond

the typical "merchant" aspects, such as oceanography and shipbuilding engineering, which are mainstays of the university.

English skills and faculty

Although most faculty stated they were hired for their English skills rather than faculty expertise and training skills, all agreed that hiring faculty today with English skills was important at the University of Hamburg. For example, the current faculty job descriptions at the University of Hamburg (2014) for Software Engineering, Education, and even German Linguistics, among others, reveals that "Foreign applicants are expected to be proficient in German or English" which demonstrates that English now has equal weight with German as far as the teaching language at the University of Hamburg. However, according to Dr Stuart, knowing or publishing in English was not important at the University of Hamburg when he started back in 1992:

> Germany at that time was very isolated. They did not care about English publications. For the past seven years, I have been publishing in English because things have changed, times have changed. I am afraid to say that all the work I have done during the early first years of my university career are now senseless because they do not go into the rankings because they are not published in international journals. A radical shift occurred when German universities began telling faculty to focus on publishing exclusively in international English publications.

Similarly, Dr Henry acknowledged that, according to his hiring committee experience, English is essential for teaching and research now at the University of Hamburg:

> For recruiting purposes, international experiences, of course, are a very important criteria and they measure that of course by the English language students you taught and how you spent part of your academic career abroad. And this is a huge plus as part of our recruiting. I was just chairing a recruiting committee and that was again a major issue and we emphasized that teaching and research in English were important components when it came to hiring new faculty.

And, according to Dr Gabriel, "If you applied for a faculty position right now, you have to give at least one presentation in English and then that discussion is in English; but 10 years ago that was not common." Thus, it appears that between seven and 10 years ago, English started to take hold at the University of Hamburg, making it more important for current faculty and for applicants of current jobs.

Dr Henry also remarked how students have come to him and asked if he could teach his courses in English:

> Actually because students realized they won't get away without knowing English. It's a truism now that you need to know the English language and they see it as an opportunity to kind of practice that and use it especially when applying for international job positions inside and outside Germany. And students appreciate that increasingly. You always have some who are always moaning. And secondly of course, at least in the Masters course they have to read English articles and they are taught in English too.

This appearance of and emphasis in English instruction at the University of Hamburg appears to coincide with two central events in Germany:

1) the passing of the *Immigration Act* of 2004 which loosened immigration restrictions, and
2) an economic recovery after three years of stagnation (OECD, 2004).

English courses at a German university

Although most faculty spoke about the importance of teaching their programs in English, Dr Stephanie stated she refused to do that in her classes:

> I do not. I refuse to do that for international students since they get every support they want, but the reason to come to Germany is Germany and not Britain or America. The reason is to introduce them to German. We help them by giving them English textbooks and partnering with other English-speaking students, but I refuse to teach wholly in English. Some English-speaking country background faculty teach in English in the School.

It is surprising that Dr Stephanie would feel this way since she serves on an internationalization committee that is looking at how best to incorporate English in programs at the University of Hamburg. Additionally, faculty in her program who are from English speaking countries teach their courses in English. But, it does match other professors' ambiguity about English at the University of Hamburg. On the one hand they believe English is important to attract international students while on the other hand they believe that international students should learn German. For example, Dr Richard not only sees English at the University of Hamburg as a "conundrum," but also as an "unsolved problem" that is fine:

> Germans are much more willing to give in and also it is much easier for them to give in. So I think from a German perspective, this tendency towards internationalization and the use of English as the standard communication is fine. It is basically accepted and it is all right.

Dr Pamela stated that they were thinking of using German as the language of instruction for their Ph.D. program in "Denmark where there are students who know German well." But, "they are no longer interested in going to Hamburg which has to do with the German language not being attractive any longer." Thus, their Ph.D. program is now in English. Dr Meiner teaches in a Masters program where the English track is for those students wanting to work abroad while the German track is focused on those wanting to stay and work in Germany. Similarly, 80 percent of Dr Stephanie's students in her program are German, take most of their classes in German, and, thus, focus on getting jobs within Germany. According to Dr Karl, his program plans on adding more courses in English, but, they "have not decided which direction to take" about establishing a Masters program completely in English at a "specific state." He added that they will "decide that in the future, but for now, it will be in German."

DISCUSSION AND RECOMMENDATIONS

Overall, it seems that Germany's "new nationalism" has indeed stimulated internationalization efforts at the University of Hamburg because, in part, of its increase in the use of English in graduate programs. However, surprising issues emerged. The first interesting issue arising from the interviews, especially considering Germany's prominence as a top world economy and a top industrialized nation that produces many high technology items, was that while studies demonstrate that English as the language

of graduate instruction is increasing in Germany overall (Brenn-White & Faethe, 2013), at the University of Hamburg it depended specifically on the program itself. Another surprising issue was the faculty's description of how the university recently failed their most recent internationalization audit by the German Rectors Conference, which they had passed previously in 2013 (University of Hamburg, International audit, 2013) and because of this, how the university hired a new Vice President of Internationalization for the university. Additionally, there was no centralized office or university-wide curricular practice regarding graduate programs in English and, in fact, while most faculty described the importance of implementing more English language courses in their programs, other faculty questioned the quality of English instruction at the graduate level as well as how to assess these English courses at the university to enhance overall quality.

Some faculty complained that, within their program, they had a hard time receiving help regarding internationalization efforts because there was no one specifically hired to do this or because administration was not interested. However, faculty stated that for the past seven to 10 years, many programs now throughout the university require that new faculty hired be able to speak German or English to be able to teach at the university. Most faculty also agreed that a marker of quality and research that was used was the number of research publications in English speaking journals in order to get credit for tenure, since at the administrative level, English was the language of research and quality. Nevertheless, these faculty expressed the tension, conflict, and ambiguity of accepting and using English as the language of research and graduate education because of internationalization to the detriment of other languages.

In the case of the University of Hamburg, Childress's (2009) recommendations for successful internationalization at universities might prove useful, considering that English is only a part of efforts that are primarily dealt with at the program level rather than at the institutional level. First, the University of Hamburg should develop a clear internationalization plan, including the role of English, and place it on the university's website as well as distribute it to all university stakeholders (p. 304). Second, the internationalization plan can serve as a "vehicle" to stimulate discussion among faculty, alumni, administrators, students, etc., at the University of Hamburg regarding internationalization where issues such as the tension between using English versus German in graduate instruction (p. 304) can be discussed. Third, the specific internationalization plan can be used to "explain and clarify the meaning of internationalization goals" and the role of English instruction (p. 305). Fourth, an internationalization plan can stimulate interdisciplinary collaboration between programs that utilize English instruction with those that do not (p. 305). Fifth, this plan could also serve as a fundraising tool, especially considering University of Hamburg's role as a state entity whose funding is based solely on the number of students in the classroom, especially with international businesses interested in recruiting students with English and/or English/German competency. Thus, external agencies could help fund internationalization efforts by seeing a clear university-wide internationalization plan regarding the widening of English instruction which can then be used to promote expansion of such programs beyond what state politicians see as a focus on programs that focus on the "merchant" aspects of the city of Hamburg in general (p. 305). Finally, a centralized campus-wide task force on internationalization should be established that comprises faculty, administrators, and students (p. 298). One of the faculty indeed mentioned that there was a campus-wide task force on internationalization, but the other faculty I interviewed never mentioned this task force. Thus, it would be essential for this

taskforce to reach out to these faculty and others who are not aware of their role regarding internationalization throughout the University of Hamburg, especially to discuss the role of English instruction such as assessment, quality, and role within internationalization efforts.

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APPENDIX A

Interview questions for faculty at the University of Hamburg

1) When did the University of Hamburg start incorporating Master's programs taught in English?

2) Were you hired specifically because of your English language skills and/or content expertise? How many years have you taught/in English within your Master's program?

3) For your doctorate/Master's degree, were you required to intern/research/teach abroad? When and where did you receive your doctorate/Master's? When and where did you do your Habilitation?

4) Why were these programs started? Were they a response to globalization/internationalization such as more competition from universities around the world for students from English speaking nations? Are there plans to create more of these programs?

5) Considering this is a German university in Germany: what are your thoughts about these Master's programs taught in English? Do you think there will be cultural repercussions such as more English loan words incorporated into German? What does the German public think of these programs? Have these students experienced any negative reactions on/off campus?

6) How has the state of Hamburg and/or Germany supported or not supported these Master's programs taught in English?

7) Where do most of the students in these programs come from? How do these students compare to German students?

8) What kind of support (financial, peer, housing, etc.) do these students have within these programs?

9) When these students graduate: how many of them will they go back to their home country, another country, or stay in Germany?

Transnational learning and Chinese sayings

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Chinese sayings within the context of transnational education have not been extensively explored within higher education. In this qualitative study, which utilized semi-structured interviews, data were collected from 24 participants to explore their transnational study experience. Chinese sayings, framed within a rich Confucian history, provide a culturally appropriate way for participants to understand their transnational learning experience. By using Chinese sayings and metaphors, the participants found meaning in their transnational education experience for personal growth and to strengthen their communities. The article provides a discussion of implications for higher education contexts and recommendations.

Keywords: transnational education; higher education; Confucianism

INTRODUCTION

Previous studies on transnational education have raised issues regarding its place in the internationalization of higher education. In China, recent trends towards internationalization have cultivated collaboration in cross-cultural research and dialogue. Although transnational education practices continue to develop in China, little research has been carried out to understand the experiences of transnational scholars within the framework of Confucianism. In a previous study (Liu, 2012), the author examined the overall transnational study experience of 24 university instructors from universities in Yunnan, China. The purpose of this paper is to discuss how the Chinese sayings used by university teachers in that study were used to describe their experiences. The central research question is: how do Chinese sayings provide a means of reflection for transnational learning? Sub-questions are:

1. How did the Chinese sayings help them communicate their transnational studies as it pertained to their professional and personal growth?
2. What did participants do with their new knowledge as they re-entered their home context?
3. How did participants describe the challenges they faced upon returning home using Chinese sayings?
4. How do the Chinese sayings that participants chose to describe their transnational studies fit within Confucianism?

Qualitative data were collected utilizing semi-structured interviews to explore these questions. After significant engagement with the data and using a grounded theory methodology, themes related to Chinese sayings or metaphorical language emerged. These Chinese sayings were analysed using the framework of Confucianism to understand how the participants used these Chinese sayings to find meaning in their experience.

SIGNIFICANCE OF THIS STUDY

Although the number of studies about Chinese transnational study experiences, particularly studies concerned with following the return of students to China, has grown in the last decade, there continues to be a paucity of understanding of the overall implications of transnational study for China and other countries interested in internationalization. This study may have applications for Chinese students as they prepare to study overseas by providing an authentic perspective of the transnational experience. In addition, this study offers a creative and meaningful framework that students returning from transnational studies can use to reflect on their experience.

In other words, this study may provide insights for Chinese students preparing to study overseas in that the Chinese sayings that were used by the participants of this study offer a glimpse into the most salient aspects of the experience, namely the strengthening of both personal and community issues. These Chinese sayings may address the most relevant aspects of the transnational experience for Chinese students and may offer a point of commonality with respect to this experience.

In addition, the findings of this study may offer a uniquely Chinese construct from which to reflect on a transnational study experience. That is, Chinese sayings provide word pictures that are both powerful and robust and can provide a meaningful and creative construct for self-reflection. Rather than engaging in reflective writing upon return from a transnational study experience, perhaps programs can encourage participants to use Chinese sayings or other culturally-appropriate proverbs or sayings to encourage self-reflection. The transnational study experience can be transformative but self-reflection using non-western constructs, such as Chinese sayings, may offer an alternative framework from which to reflect.

LITERATURE REVIEW

The Chinese transnational experience

Transnational education experiences vary significantly depending upon many factors, including individual learning styles, context of learning, length of time studying abroad and study location. Recent studies on Chinese students returning home after transnational studies have demonstrated the value of these studies, particularly for the students (Gu & Schweisfurth, 2015; Kettula, Lampinen, Fei, & Jiang, 2013) and higher education instructors (Smith, 2009).

In one study, researchers found that Chinese students returning to China after completing their degrees in the UK reported significant changes that ranged from personal to professional. Of particular interest is the finding that returnees "felt that as a result of their study abroad experiences, they were more knowledgeable about their own Chinese backgrounds and home culture than those who never stayed abroad for a lengthy period of time" (Gu & Schweisfurth, 2015, p. 958). Students returning to China commonly experience a shift in identity, having become more aware of the multitudes of dimensions associated with different cultures. This transformation of identity involves the examination of values, which may lead to a renewed sense of self. The participants in this study described a similar experience and used Chinese sayings to express many of their complex insights.

In another study (Kettula et al., 2013) Chinese participants used journals to reflect on a short pedagogical workshop developed cooperatively between a Chinese and Finnish university. The journals allowed participants to write their impressions in response to questions posed by the researchers. Although Kettula et al.'s study was for a brief experience, it highlights the value of using specific types of prompts to elicit the kind of self-reflection that may be valuable for those returning from a transnational study experience.

Transnational education in China

Transnational higher education in China has gained recognition within the broader concept of internationalization. The concept of internationalization is sometimes interchangeably used with that of globalization but the ideas, while closely related, are distinct from one another (Yang, 2002). Yang argues that internationalization for a university is "the awareness and operation of interactions within and between cultures through its teaching, research and service functions, with the ultimate aim of achieving mutual understanding across cultural borders" (p. 83). Globalization, however, in its broadest form is:

> [S]ocial processes that transcend national borders. While the concept of globalization spans separate, overlapping domains, it is fundamentally an economic process of integration that transcends national borders and ultimately affects the flow of knowledge, people, and ideas. (Yang, 2002, p. 83)

Globalization is most often understood in strictly economic terms, while internationalization remains largely cultural, although economic factors certainly influence its development, especially in higher education.

The term "internationalization" of higher education has evolved into a number of models and definitions that have been described by numerous authors; such definitions have also sparked discussions about indicators that may measure outcomes of the "internationalization" at a particular university. Knight (2015) has described three main internationalization models: the *classic, satellite,* and *co-founded* models.

This study focuses on a transnational study undertaken by university teachers at Chinese universities within the classic model of internationalization. That is, all participants were enrolled in a formal graduate degree program at a university located outside of China, namely in the US, Canada, the UK and Finland. Knight (2015) describes this model as, "an institution that has developed multiple activities and partners, both at home and abroad, and involves a broad spectrum of intercultural and international academic, research, service, and management initiatives" (Knight, 2015, p. 109). However, Knight cautioned that such a discussion "will only be as strong as the inputs and process, and the three need to be examined together" (Knight, 2015, p. 109).

Classic transnational model in China

Transnational education in China has experienced quite a few changes since the mid-1980s when Deng Xiaoping's Open Door policy reforms opened China to the rest of the world. The most significant influence on the development of transnational higher education in China has been the influence of government entities, such as the State Education Commission and the Ministry of Education, on improving the quality of higher

education. Several pieces of legislation have been passed that call for greater cooperation with foreign partners in the area of education for transnational studies, including the 1995 *Education Act of the People's Republic of China*.

After the decade-long Cultural Revolution changed much of the education system in China, scholars were encouraged to study abroad in the hope that they might return with fresh ideas and usher in new educational reforms (Beijing University School of Education & Zhongshan University Institute of Higher Education, 2005). Although China has had a transnational education program for several decades, developments, such as China's entry into the WTO in 2001, sparked further rapid expansion of the program. Since the initiation of the Open Door policy, the growth and development of China's transnational higher education has been characterized by a confluence of local and global factors.

Huang (2003b) attributes the increased demand for university programs as one influence on the development of transnational higher education in China. There are simply too few universities to accommodate the increased number of students in China. For this reason, students are looking beyond China's borders for opportunities to study. However, with the rise of China's economic global strength, more and more Chinese students are returning to China following studies overseas. These forces have caused transnational education in China to develop into a complex system with both opportunities and challenges at the institutional and societal levels that, at times, is at odds with the stated transnational higher education policy of China (Hou, Montogmery, & McDowell, 2014). Despite the challenges, there continues to be a healthy growth in the number of Chinese students pursuing degrees overseas.

The *Open Doors Report* (2015) published annually by the Institute of International Education with support from the US Department of State's Bureau of Educational and Cultural Affairs, reported that, in the 2014-2015 academic year, the total number of international students studying in the US was 974,926, which is a 10 percent increase in the overall enrolment of international students from the previous year. The number of Chinese international students studying in the US during the 2014-2015 academic year rose from 274,439 to 304,040 a 10 percent increase over the 2013-2014 year. China makes up 31 percent of the overall number of international students studying in the US in the 2014-15 academic year. This percentage represents a steady rise in enrolments since the 2004-2005 academic year. On the back of this trend, universities in the US and China are creating new and innovative transnational education models and programs.

Satellite and co-founded transnational education in China

The backing of the Chinese government has encouraged the growth of transnational education in China. Huang (2003a) argues that internationalization not only includes scholars' transnational study experiences but also the cultivation of Chinese university influence on the curricula and policies of the universities of other countries. Establishing Chinese influence is being done, for example, through the establishment of Confucius Institutes on campuses throughout the world, particularly North America and Europe, which enables China to export its language and culture (Mooney, 2007; Starr, 2009). Huang (2007) defines China's model as "transitional" (p. 424) because China is moving away from predominantly importing higher education services and is attempting to expand its education services overseas, thus enabling increased internationalization abroad while retaining distinctly Chinese characteristics.

Collaborative initiatives have also encouraged Chinese universities to cultivate partnerships with foreign universities (Feng, 2013; Rui, 2008). Such models hold great promise but require significant oversight and regulation.

Given the increase in transnational education opportunities for Chinese students, both to study abroad and to study in foreign university partnerships within China, it would be useful to gain insight into how students involved in the classic transnational education experience frame their experiences upon return to China. In this study, participants often used Chinese sayings to describe their transnational study experience. These sayings are often embedded within Confucian values, so an initial overview of Confucianism may help shed light on these sayings.

Chinese sayings and Confucianism

Almost all of the participants in this qualitative study described their transnational learning experience using Chinese sayings or metaphors. Chinese sayings include *chéngyǔ* (成语, four-character idioms) and *yànyǔ* (谚语, proverbs). These sayings are commonly used in China because they provide profound and image-rich meanings and are often anchored in Confucianism. Some participants also used metaphors to describe their transnational experience. The participants of this study used these sayings to describe their transnational study experience, which they described using rich, artistic imagery that engages the soul with its emphasis on character or moral development. Participants of this study describe not only how that they grew personally and professionally, they also expressed a desire to bring these changes to their communities. In order to understand how Chinese sayings are used by the participants of this study, an overview of some of the basic tenets of Confucianism may be useful.

Confucian philosophy has greatly influenced the development of education and learning in China for centuries and, despite politial and social changes in China in recent years, Confucianism remains deeply embedded in Chinese society. Confucius never actually wrote down his ideas but his students collected his sayings into what is known as *The Analects*. These collections of stories and sayings provide the best understanding of Confucianism. Two series of books, *The Four Books* and *Five Classics (四书五经)*, contain the principles of government and the administration of society, and the maxims of personal conduct that form the foundation of the ancient civil service examinations used for centuries by Chinese dynasties.

Confucius regarded thinking and reflection as precursors to learning and as paramount to life itself when he said: "he who learns but does not think, is lost. He who thinks but does not learn is in great danger" (Analects 2, #15). Further, the concept of *ren* (仁), commonly translated as "benevolence", must inform learning at a fundamental level. To better understand this Confucian concept, Zhang (2002) suggests considering the actual Chinese character for *ren*:

> The character *ren* is composed of the graph for human being and that for the number two. It is the expressive of the relations that should pertain among human beings. Hence it has been translated as "humanity," "benevolence," "love," and to bring out the sense of relationship, "co-humanity." It is also the supreme virtue that encompasses all others and so is rendered "goodness," "perfect virtue." It is thus pre-

eminently a virtue of society rather than an internal matter of conscience alone. (p. 285)

The idea of *ren (仁)* is closely related to learning and is defined in moral rather than academic terms. The Confucian philosophy of learning encourages the pursuit of moral virtue, which leads to the attainment of knowledge. From the Confucian perspective, the pursuit of knowledge must be for the purpose of improving moral character with the view to society as a whole, not primarily for individual development. This concept explains why the participants in this study often use Chinese sayings that have few words but profound personal meanings.

Confucianism's emphasis on holistic thinking led to an education system that encourages improving the whole person, including the moral character of a person, not simply increasing knowledge. Chinese university instructors in this study use Chinese sayings to describe their transnational experience as a rich tapestry in which individual experience is often framed and cultivated within a larger community, which resonates with Confucian principles. Rather than viewing their experience as professional development, which in most cases was professional advancement also, many saw it as a way of strengthening their own moral fibre to benefit their communities. Wang and King (2008) have described the relationship between Confucianism and learning, particularly in relation to the metaphysical aspects of learning within a Confucian context:

> To be exact, learning as the cultivation of one's inner experience(s), has a sacred purpose, that is to aid one to become a sage, a genuine person so that the genuine person should be free from four things: arbitrariness of opinion, dogmatism, obstinacy, and egotism. (p. 136-137)

Confucius taught that students should be active learners who could draw relevant lessons from whatever they studied and who could use few words to describe great truths:

> The Master said, "I never enlighten anyone who has not been driven to distraction by trying to understand a difficulty or who has not got into a frenzy trying to put his ideas into words. When I have pointed out one corner of a square to anyone and he does not come back with the other three, I will not point it out to him a second time." (Analects 5:9)

Confucianism's emphasis on the cultivation of character in oneself and others, as well as its focus on simply-stated but profound truths provide a backdrop for understanding how the participants of this study use Chinese sayings, proverbs and metaphors to frame their transnational experience.

DELIMITATIONS OF THE STUDY

The original study focused on teachers who studied abroad in western countries in the context of transnational education after 2000, when significant transnational education reforms and initiatives took place in China. Transnational studies can refer to either studying outside of one's home country or studying at a foreign university within one's home country; though in this study participants were limited to Chinese teachers who studied abroad and did not include Chinese teachers studying in a foreign university "satellite" campus in China. The study is also limited to teachers from eight universities in Yunnan, China.

LIMITATIONS OF THE STUDY

One of the challenges facing outside researchers in China remains gaining access to individuals who feel free enough to share their personal experiences in a safe environment, free from any external constraints, such as professional affiliation or institutional loyalties sometimes found in fields such as health care. Despite significant funding and backing of such agencies and institutions, researchers in fields such as education (Cook, 2008) and health (Aldinger et al., 2008) report that interviews with participants are sometimes affected by the presence of officials and the desire to make a good impression on "foreign experts."

Understandably, Chinese teachers who have participated in an overseas study program funded by a government office or their *dan wei* (单位, work unit), would like to present their experiences in a positive light. The saying, "Don't bite the hand that feeds you," explains this idea, but the construct of "face" provides a more culturally-appropriate context of understanding this limitation. *Mian zi* (面子), is an Asian construct that has no equivalent in the West, but helps to explain why some participants may feel compelled to give an overly positive picture of an experience that has been paid for by a third party. Just as an individual can lose face, so can larger entities, such as institutions or countries, lose face.

To foster greater rapport with each participant, interviews were conducted in safe environments that are quiet, neutral and non-threatening places, such as cafés or tea houses. By assuring each participant of confidentiality and ensuring a safe environment in which to speak honestly, the interviews provided plenty of significant data. These data sources include visual materials, such as pictures, that teachers have collected to document their experiences.

METHODS

In order to examine and understand Chinese sayings within the framework of Confucianism, I chose three criteria for selecting participants in my study. First, the Chinese instructors in this study had at least five years of teaching experience in the Chinese context before engaging in transnational studies. This time allows for instructors to form their own pedagogical styles. Second, the instructors had studied overseas for at least one year and had been back in China for at least one year, allowing for sufficient time to overcome the culture stress they may have experienced in the foreign culture as well as re-acculturation into their own culture. This time allowed for instructors to reflect on a relatively fresh experience within the context of their home culture and environment. Of the 24 participants in this study, 23 studied in North America or the UK, and one studied in Finland (see Table 1).

Table 1: Study participants

Name	Gender	Age range	Years since transnational studies
Kun	Male	40-49	1-5
Chun	Female	30-39	1-5
Bao Yu	Female	40-49	6-10
Jing	Male	50+	6-10
Huang	Male	40-49	1-5

Name	Gender	Age range	Years since transnational studies
He Ping	Male	40-49	1-5
Liang	Male	40-49	6-10
Kang	Male	30-39	6-10
Da Xia	Female	40-49	1-5
DeShi	Male	40-49	1-5
Dong	Female	40-49	6-10
Feng	Male	50+	6-10
Gan	Female	30-39	6-10
Ju Long	Male	40-49	1-5
Fang Hua	Female	50+	10+
Shen	Male	40-49	6-10
Mei	Female	40-49	1-5
Mei Xing	Female	50+	6-10
Sheng Li	Female	40-49	1-5
Zhuang	Male	40-49	1-5
Yi	Female	30-39	1-5
Xiao Ping	Male	50+	6-10
Yun Qi	Male	50+	10+
Xiao Xing	Female	40-49	1-5

Participants

Face-to-face semi-structured interviews were conducted with 20 of the participants. All these participants hold a variety of positions at universities but were all instructors at one of eight universities in Yunnan, China. One interview was conducted over the phone and three participants answered questions via e-mail correspondence. Semi-structured interviews lasting at least 60 minutes were recorded using a digital audio recorder, transcribed into English or Chinese, and translated whenever necessary. Subsequent follow-up interviews, lasting 30 minutes or less, were scheduled to clarify any points that were unclear.

Once initial semi-structured interviews were completed, insights that emerged from those interviewed helped direct future interview questions more carefully. Questions in future interviews changed to accommodate emerging data from previous participants. The questions, however, remained open-ended rather than a yes-no format. This encouraged participants to elaborate on their experiences.

As interviews were completed, I created memos about interviews with particular details of information that seemed potentially relevant. Observations following interviews included descriptions that were thick and rich (Geertz, 1973) that guided the subsequent analytic process of making categories and coding.

Once saturation was reached in certain categories, subsequent interviews did not include those questions but concentrated on clarifying nuances within emerging categories.

Data gathering and analysis

Interview data was supplemented by information from university websites, and, government documents on official websites.

Qualitative data analysis involved multiple steps in a process that Creswell (2007) has described as a "spiral" (Creswell, 2007, p. 150). Grounded theory was used as the basis for analysis, which Charmaz (2005) describes as a "comparative method in which the researcher compares data with data, data with categories, and category with category" (p. 517). Data analysis is a dynamic process that involves simultaneous but not necessarily sequential steps. As such, each turn of the "spiral" necessarily involved both analytical and interpretive lenses. The category "sayings and metaphors" emerged late in the process after further engagement with the data.

Interviews conducted in English were transcribed by Transcription Hub, and the interviews conducted in Chinese were transcribed by Flat World Solutions. Chinese transcriptions were translated into English using Kingsoft Powerword Translator 2007 and the website www.nckiu.com for unknown words or phrases, but were otherwise translated by the author, and checked again by various native Chinese speakers in the US and China.

The data was then entered and analysed by the author using NVivo 8 qualitative software, which facilitated the handling of large quantities of different kinds of data, such as audio files. In addition, NVivo 8 allowed for extensive note writing, memo writing, and frequency counts of codes as necessary.

Three types of coding were used (Strauss & Corbin, 2008): open, axial and selective. The analytic tools described by Strauss and Corbin (2008), such as asking questions, making comparisons, looking at the language and looking at emotions expressed by participants throughout the process of data analysis, were also used.

In addition to coding, memos written by the author provided visual records of analysis; the memos are products of the author's analytic reflection and provided more in-depth thought than field notes. Memos were particularly helpful in understanding Chinese metaphors and sayings. These memos allowed engagement with the data throughout the whole process and enabled the author to revisit previously understood sayings in light of emerging patterns and themes.

Validation strategies

In order to establish credibility, several strategies were used in this study. Creswell and Miller (2000) advise the use of eight strategies but this study used just five: triangulation of sources and methods; member checks; thick, rich description; and prolonged engagement in the field. With respect to triangulation, multiple sources, such as personal artefacts, were used to help document and corroborate the instructors' overseas studies experiences.

Member checks "whereby data, analytic categories, interpretations, and conclusions are tested with members from whom the data were originally collected, are the most crucial technique for establishing credibility" (Lincoln & Guba, 1985, p. 314) and also provided a means of establishing credibility. Member checks by email or phone were used throughout data collection and analysis. Rich, thick descriptions (Geertz, 1973) provided detailed information that was also used as a validation strategy to increase transferability.

FINDINGS

All participants, as they reflected on their transnational study experience, often used Chinese sayings or visceral metaphors that highlighted the significance of *learning for a purpose other than personal growth*. That is, their transnational experience provided personal and professional growth that produced a desire to improve their communities. Several participants used the same Chinese sayings to describe their transnational experience. The sayings most commonly used reflect a sense of personal responsibility to change their communities not simply to gain professional expertise. The sayings and metaphors used by the participants throughout the interviews reveal that participants' transnational experience involved more than personal transformation. They viewed their transnational learning experience as compelling reasons to improve personally and in community.

Four significant sayings or metaphors emerged following data collection and analysis. These four themes, or strands, highlight specific Confucian values that are essential to understanding how participants found meaning in their transnational experiences.

Learning for individual strength: *Stones from other hills*

Several participants described their transnational studies as having helped their own professional and personal growth. This kind of learning from others is seen as a "treasure" and "nourishment" for one's culture. Bao Yu used a Chinese proverb, "stones from other hills may serve to polish the jade of this mountain (他山之石 可以攻玉)," and explained that learning from others serves to "polish" her own treasures. In other words, her experience overseas served to polish her own life in various ways, including her teaching. This saying not only illustrates the value of learning from others to improve oneself, it also underscores the intrinsic value placed on learning to transform self that is key in a Confucian context.

Zhuang also viewed his transnational studies as a precious experience. When I asked Zhuang to describe the most important aspect of his experience, he expressed it this way:

> Since I'm a teacher of English I think that's a good chance for me, even similar teachers of English to go to native English speaking countries to experience the lifestyle, cultural background and even language learning and application as well. That's a good practice and, very precious opportunity.

Further, Bao Yu explained that learning from other cultures is like the nourishment of food, quite a visceral description:

> If you always have the traditional food, maybe the nutrition will be out of control, out of balance. If you eat different food, different flavour, that'll make you healthy. We should learn a lot from the outside world. So far we learned not enough. We should have more experience, more food to nourish our culture.

In order to maintain health, she argued, one must eat different kinds of foods. In the same way, trying different cultures can expand understanding and develop a healthier person.

Most participants described their transnational studies as enriching but extending beyond themselves. Many saw themselves as being simple and humble connectors between the West and China. Da Xia described her feelings by using a metaphor:

> I think for me, it is just like a bridge, but I think I am just a little bridge, just a little wooden bridge. I can, with my eyes, I can see a lot and then when I came back and I can share those things with my colleagues and with my students. But I know it's not the same thing as ways to show off something.

Da Xia looked down to the floor as she described this to me, but I had the sense that her words resonated with power and strength yet without prideful boasting, which is consistent with a strong Confucian value of personal humility. Many participants communicated a sense of confidence as they explained their choice of proverbs and metaphors.

Learning for individual strength: *Strong points to offset own weaknesses*

Another saying that several participants quoted during our interviews was: "learn from others' strong points to offset your weakness" (*qǔchángbǔduǎn,* 取长补短). Participants quoted this common Chinese saying to explain how they viewed transnational studies as a way of learning from other perspectives to strengthen individual qualities. Like many of the participants, Liang described this dynamic kind of learning as strengthening:

> Objectively speaking, the western education system does have many features and good qualities, in many ways that China can learn from, but it must not and cannot copy. After all, the conditions are very different. The scientific attitude is, "learn from others' strong points to offset your weakness." This is an appropriate proverb.

This idea echoed with many participants in their description of their transnational studies. That is, rather than simply learning for individual professional development, participants felt a commitment to bring the experience that changed them to their communities.

Learning for community strength: Metaphor of guide or coach

Nearly all participants described their experience with the saying, *quchangbuduan* (取长补短, learn from others' strong points to offset your weakness) but they also used this saying to describe how their transnational experience strengthened their communities. One participant, Mei Xing, used the term "coaching in wisdom" to reflect how this change had an impact on her position and influence at her university. Mei Xing described how knowledge and wisdom are different and how she felt she had grown in wisdom, which strengthened her university community:

> We have some teachers who are very proud of their knowledge. Knowledge is sometimes … it's just nothing, but wisdom is very … it's different. So if I'd teach the teachers, okay, if I were to find a course or set up a course to train these teachers to teach them, then I would say, yes, coaching in wisdom.

The imagery of a coach, while not unique culturally, shows a level of connectedness and emphasis on character development that is fundamental from a Confucian perspective.

Most participants regarded their experience as an opportunity for growth in wisdom to benefit a greater whole, not merely their personal ambitions. For example, Ju Long shared that he gained greater respect for his students as a result of his transnational study experience. As a result, he engaged his students in more dialogues following his studies. Zhuang adjusted his teaching to meet his students' expectations, "I did some study on the needs and wishes or expectations of students in learning English. So I adjusted my teaching strategies to meet those designs or expectations."

Yunqi used the metaphor of a teacher/guide as he considered how he had changed in his teaching. He said, as a guide, he now considers how to "propose a dialogue or collaborative partnership" with his students. As participants describe the change in their teaching, many focused on the changes in their character and how this has affected their view of teaching and learning. Kang described it this way:

> I think the most suitable and effective influence is on the students because my teaching style, my thinking style, which have been affected by western culture, can improve their character very quickly. I am not only teaching my students science and technology, but also how they change their thinking in different way, how they improve their character.

The emphasis on improving character resonates with Confucian values that emphasizes holistic learning that transforms every aspect of life. Xiao Xing described a change in "the attitudes to life and to the way of learning and teaching." She explained further: "The benefit is direct to the students, directly to the students. I can change a bit of my teaching method and I think the students, hmm, may get some benefits for this change and this kind of change."

Learning for community strength: *Rivers run into the sea*

Many participants used sayings and metaphors to frame their transnational experience to communicate individual transformation for the purpose of transforming their communities. Bao Yu explained this concept to me by using a Chinese proverb , *hai na bai chuan* (海纳百川, all rivers run into the sea) found in the *Dao De Jing* (Hinton, 2002, p. ch. 32), an ancient book historically attributed to Laozi, a famous Chinese philosopher who lived in the sixth century BC. Bao Yu explained that the proverb means that just as rivers flow into the sea from many sources so learning can be described as a confluence of diverse cultural, philosophical and spiritual ideas. She explained further that this proverb helped her to frame her own experience as a process of building to form a larger, more significant picture of learning.

CONCLUSIONS

The findings of this study show that participants used a variety of Chinese sayings and metaphors to provide a framework from which to negotiate and draw meaning from their transnational learning experience. These Chinese sayings and metaphors are, not surprisingly, drawn from Confucian elements of moral character and community. However, what is surprising is the personal sense of power as described by strong imagery that they gained from their personal moral growth as a result of their transnational experience. Chinese sayings and metaphors that emerged related to power and strength despite the challenges associated with their experiences. Their transnational learning

experience is characterized by two main ideas: their transnational experience was viewed as beneficial to themselves and their respective communities; and the Chinese sayings using imagery of power and strength commonly cited by participants provides a meaningful framework to understand the transnational experience.

First, these sayings and metaphors provide a culturally-appropriate context to describe benefits for both personal growth and communities. Specifically, these Chinese sayings and metaphors reflect a strong Confucian perspective of learning that embraces personal learning for the benefit of moral character and to improve a larger community. The Confucian philosophy of learning encourages the pursuit of moral virtue and, in so doing, other outcomes, such as the attainment of knowledge, will naturally follow. This contrasts with the Socratic method of learning espoused in many North American and European contexts. That is, from the Confucian perspective, the pursuit of knowledge must be for the purpose of improving personal moral excellence with the view to society as a whole and not primarily for individual development.

Nisbett (2003) argues that the differences between Asian (those cultures that have been influenced by Confucianism) and Western (those cultures from western European descent) educational systems stem from the contrasting philosophical underpinnings of Confucius and Greek philosophers respectively. Specifically, Confucianism's emphasis on harmony and holistic thinking has led to an educational system that encourages more than the transmission of knowledge and places an emphasis on the whole person. Consequently, university teachers may view transnational studies as an opportunity to not only improve their own professional skills but also develop their overall moral character.

Secondly, the imagery of power and strength that the participants of this study described were greatly transformative in that many of the participants returned with a strong sense of empowerment to change their communities, despite the length of time that had passed since their return. This transformative sense of power gained by the participants, especially the women in the study, provides a tremendous incentive to cultivate transnational studies. This transformative power is the kind of goal that Knight (2013) has described as being a goal within the context of internationalization. This process of personal internationalization is perceived and processed through Chinese sayings and metaphors. Rather than consider such a study experience as exclusively being tied to professional advancement, it may be viewed as a way of strengthening and transforming a person.

Nearly all the participants in this study experienced some degree of personal or professional transformation after their transnational studies – often through self-reflection, which is common in Confucian contexts. Participants were also aware of their personal weaknesses and strengths, particularly as they compare and contrast experiences in China with that of the study country. They become more sensitive to the differences within education systems, particularly in the area of personal and professional freedoms.

The findings of this study suggest that part of the transnational learning process for Chinese students involves engagement with imagery to find meaning for their experience. For example, participants in this study used images that suggest a valuable or "treasured" experience. One participant, Bao Yu, used imagery suggesting a life-giving experience, "like the birth of a baby."

The implications of this study suggest that Chinese sayings and metaphors may offer another construct to understand the transnational learning experience from a non-Western perspective, particularly for students studying in areas with significant differences in cultural, linguistic or spiritual contexts from their own home country. This construct may provide another type of prompt for self-reflection following a transnational study experience.

The findings of this study offer two possible applications for institutions. First, universities need to find ways to engage the imagination of students prior to and returning from transnational studies. In this way, engagement with literature, such as sayings or metaphors, can be used as a framework to understand the transformative process of transnational studies. Further, universities can foster environments that engage with culturally-appropriate literature of both contexts to bridge connections that may emerge following transnational studies.

Second, institutions of higher education interested in encouraging transnational study experiences for their students need to pay attention to the imagery that may be associated with a transnational study experience. To that end, universities may need to encourage students to use sayings or proverbs in the process of self-reflection following transnational studies.

More research is needed to understand how these Chinese sayings and metaphors may provide a way for students to engage their imagination to find meaning in their transnational studies following return to their home countries. Engaging the imagination in sayings, proverbs and metaphors of other cultures, like the Chinese, may offer lessons for the West that may cultivate more robust transnational learning experiences in higher education. Such sayings allow individuals to reflect on life, and this may be the most valuable and transformative aspect of transnational education.

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APPENDIX B

INFORMED CONSENT FORM: INTERVIEW (CHINESE)

知情同意书: 面谈

参与者名字: _____

我授权_____或任何指定的研究助理就"我的跨国教育经历" 这一研究主题，向我收集信息。

我知道此研究的目的是收集中国大学教师海外留学的相关经历，我会被问及有关我跨国教育经历的问题并可能会参与小组讨论，我所参与的时间总计大约不超过 5 小时。

我知道我可以选择不回答任何令我尴尬或反感的问题。

我知道我的参与是自愿的，在任何时候我有权拒绝或中止我的参与而不会有惩罚或利益损失。

我知道如果这项参与会给我带来一些过度的焦虑或压力，或我对此研究有疑问或作为参与者就我的权利产生疑问，而这些都是由于此参与过程所引起的话，那么海笛刘可提供咨询，并对在研究参与中不太可能发生的人身伤害事件，也可提供有关的医疗救助。 研究结果将由研究者为所有参与者使用假名保持其私密性。没有我的书面同意，我个人的研究结果将不准予发表。

任何面谈的录音会被录制，但其运用不会导致个人身份的暴露或人身伤害。

这项研究的潜在益处是帮助跨国教育领域的人们获得对中国大学教师跨国教育经历的了解。

_____ _____

签名   日期

此同意书一式两份，请签署一份并附上你的回应返还给研究者，另一份你可保留作证。

APPENDIX C

INFORMED CONSENT FORM: INTERVIEW

Participant's name: _____

I authorize_____, and/or any designated research assistants to gather information from me on the topic of my transnational learning experience.

I understand that the general purposes of the research are to gather data related to the experiences of Chinese university teachers who have studied overseas, that I will be asked to answer questions related to my transnational learning experience, and possibly participate in group discussion, and that the approximate total time of my involvement will be no more than five hours.

I am aware that I may choose not to answer any questions that I find embarrassing or offensive.

I understand that my participation is voluntary and that I may refuse to participate or discontinue my participation at any time without penalty or loss of benefits to which I am otherwise entitled.

I understand that if, after my participation, I experience any undue anxiety or stress or have questions about the research or my rights as a participant, that may have been provoked by the experience, _____ will be available for consultation, and will also be available to provide direction regarding medical assistance in the unlikely event of physical injury incurred during participation in the research.

Confidentiality of research results will be maintained by the researcher by using pseudonyms for all participants. My individual results will not be released without my written consent.

Any audio recordings of interviews will be transcribed and will not be used in a manner that could cause personal identification or harm.

The potential benefits of the study are to help others in the field of transnational education gain an understanding of the transnational learning experiences of Chinese university teachers.

_____ _____
Signature   Date

There are two copies of this consent form included. Please sign one and return it to the researcher with your responses. The other copy you may keep for your records.

APPENDIX D

INTERVIEW PROTOCOL

1. Why did you choose to study overseas?

2. What were some difficulties you encountered overseas and upon returning to China?

3. How have you balanced new knowledge with local or indigenous knowledge once you returned to China?

4. How has your transnational educational experience changed you professionally and personally?

5. What do you think is the role of your transnational learning experience in your own university?

6. How have your transnational learning experiences changed your attitudes and perceptions about the current Chinese and western education systems?

7. How have your transnational learning experiences affected your attitudes and perceptions of internationalization of higher education in China?

8. If you could choose a metaphor to describe your experience, what would it be?

APPENDIX E

INTERVIEW PROTOCOL (CHINESE)

1. 您为什么选择出国留学？

2. 出国留学时遇到的具体困难是什么？

3. 您怎样来平衡新学的知识和当地或本土的知识间的关系？

4. 您的留学经历对您的职业和个人生活有何影响？

5. 您认为自己的留学经历对您所在的大学有什么样的作用？

6. 您的留学经历是否、怎样改变了您对当前中国教育体系和西方教育体系的看法和态
   度？

7. 您认为自己的留学经历怎样影响您对中国高等教育国际化的态度和观念？

8. 如果您可以选择用比喻的方式描述您的经历，您将如何描述

Comparing the Indonesian Kurikulum 2013 with the Australian Curriculum: Focusing on science for junior secondary schools

Perbandingan Kurikulum 2013 Indonesia dengan Australian Curriculum: Dengan fokus pada Ilmu Pengetahuan Alam (IPA) pada tingkat Sekolah Menengah Pertama (SMP)

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The introduction of a new curriculum in Indonesian schools seeks to bring about changes in Indonesian society as well as students' knowledge base. The curriculum is based on two layers of competencies: Core Competencies, and Basic Competencies. Core Competencies are applicable at all year levels and for all subjects. They include religious and social attitudes as well as knowledge, skills, and the application of knowledge. The Science Curriculum for junior high school is promoted as integrative science; some of the basic competencies demonstrate a cross-curriculum approach more successfully than others. When compared to the Australian Curriculum, the Science Curriculum reveals that the contents are similar, as are key ideas and skills, and each curriculum has its approach to assessing achievement. Sustainability is a major cross-curriculum feature of both curriculums. The introduction of Kurikulum 2013 has not been without controversy, with schools using the previous curriculum while Kurikulum 2013 undergoes further trialling.

Penerapan kurikulum baru untuk sekolah Indonesia tampak menghasilkan perubahan pada masyarakat Indonesia begitu juga pengetahuan peserta didik. Kurikulum bebasis pada dua jenjang kompetensi – Kompetensi Inti dan Kompetensi Dasar. Kompetensi Inti diterapkan untuk setiap kelas dan setiap mata pelajaran, serta meliputi kompetensi sikap spiritual, kompetensi sikap sosial, kompetensi pengetahuan, kompetensi keterampilan dan penerapan pengetahuan.

Kurikulum Ilmu Pengetahuan Alam (IPA) untuk Sekolah Menengah Pertama (SMP) dimajukan sebagai integrative science, dan pendekatan antar-kurikulum ditunjukkan untuk beberapa kompetensi dasar dengan lebih keberhasilan daripada kompetensi dasar lain.

Perbandingan untuk Australian Curriculum: Science [Kurikulum Australia: IPA] menyingkapkan beberapa persamaan dan perbedaan. Konten adalah kesamaan, juga ide pokok dan keterampilan, tetapi penilaian prestasi ditinjau secara berbeda pada setiap kurikulum. Keberlanjutan adalah prioritas antar-kurikulum pada kedua kurikulum.

Penerapan Kurikulum 2013 sudah controversial. Mendikbud yang baru mengizinkan sekolah menggunakan Kurikulum 2006 (KTSP), kurikulum lama, selama Kurikulum 2013 diuji lebih lanjut.

Keywords: Indonesian Kurikulum 2013; Australian Curriculum; integrative science; competencies; national curriculum

INTRODUCTION

Kurikulum 2013 is the latest curriculum released by the Ministry of Education and Culture of the Government of the Republic of Indonesia. The implementation of Kurikulum 2013 has been very controversial. This paper discusses several issues concerning the 2013 curriculum.

The paper begins by outlining the primary and secondary school education systems in Indonesia from the perspective of implementation. The paper then examines Kurikulum 2013 for its basis and competencies. The curriculum for science is examined in greater detail, especially as it pertains to the junior secondary level, and it is compared to the Australian Curriculum.

PRIMARY AND SECONDARY EDUCATION IN INDONESIA

Schools in Indonesia are divided into two groups, public schools and private schools. Public schools are those organised by the Government of the Republic of Indonesia (Pemerintah Negara Republik Indonesia (PNRI)), especially the Ministry of Education and Culture (Kementerian Pendidikan dan Kebudayaan, Kemendikbud). Many public schools are Islamic schools or *madrasah* that are financed by the Ministry of Religion (Kementerian Agama, Kemenag). The curriculum for all schools, both Kemendikbud schools and Kemenag schools, is arranged by Kemendikbud. Private schools can use the national curriculum or another authorised curriculum.

The education system in Indonesia has three formal levels of schooling, namely primary (Sekolah Dasar (SD), Years 1-6), junior secondary (Sekolah Menengah Pertama (SMP), Years 7-9) and senior secondary (Sekolah Menengah Atas (SMA), Years 10-12). Vocational schools (Sekolah Menengah Kejuruan (SMK), Years 10-12), that focus on several forms of vocational education, also exist at the third level.

In Indonesia, school education is compulsory for all students from Years 1 to 9, although there are students who do not go to school anymore because their families are too poor to afford tuition. According to Suharti (2013), about 81 percent of students completed primary school in teaching year 2007/2008, and 87 percent of students who started junior secondary in 2004/05 finished three years later. In 2013, Kemendikbud announced a compulsory learning program of 12 years, namely from Year 1 in SD to Year 12 in SMA (Natahadibrata, 2013).

KURIKULUM 2013

Dokumen Kurikulum 2013 (Kurikulum 2013) (Kemendikbud, 2012) was released during the second term of President Susilo Bambang Yudhoyono by the Minister of Education [Mendikbud], Mohammad Nuh, in 2012. This was introduced to all schools in Indonesia to start in July 2013 at certain levels. In 2013, three documents for each level of education, which, together, were called *Kompetensi Dasar (Basic Competencies)* were published by Kemendikbud (2013a; b; c). Kurikulum 2013 replaces a previous curriculum, Kurikulum Tingkat Satuan Pendidikan (KTSP), also known as Kurikulum 2006, which was also competency-based.

Kurikulum 2013 includes the background, basis and principles for development of the curriculum, and the structure for its implementation. Information regarding the background includes the legal, philosophical, theoretical and empirical basis (Kemendikbud, 2012).

Legal basis

According to the *1945 Constitution* and Pancasila,[1] the PNRI is responsible for the development of education regarding the needs of society. *Law 20 of 2003* concerning the National Education System states that the PNRI is responsible for educational policy, curriculum and national educational standards (Al-Samarrai & Cerdan-Infantes, 2013). Kemendikbud is the agency of the PNRI that is responsible for organising primary and secondary education, and it prepares curriculum documents for use in schools throughout Indonesia.

Philosophical basis

The connection between education, culture and religion is very strong in these Indonesian curriculum documents. The function of education is to develop students to become good citizens. According to *Law 20 of 2003*, students "become religious and pious humans to the one and only great God, of noble character, healthy, knowledgeable, skilful, creative, independent, and become democratic and responsible citizens" (Kemendikbud, 2012, p. 3). This statement is repeated in the curriculum documents and various commentaries (e.g., Nuh, 2013; Prihantoro, 2015). The intent is that people should also influence education: "Education is rooted in the people's culture" (Kemendikbud, 2012, p. 3).

Theoretical basis

Kurikulum 2013 is based on two educational ideas: competencies and educational standards. Before the Kurikulum 2013 documents were written, there were pre-existing documents: the *Graduate Competency Standards* and *Content Standards*. Both are referred to in Kurikulum 2013. These standards documents were developed by the Board of National Education Standards for Kemendikbud. According to Kemendikbud (2012, p. 5), "Competencies are the ability of someone to display attitudes, use knowledge and skills to carry out a task in school, society and environment where they interact."

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[1] Pancasila is the five guiding principles of the Indonesian state; education relates to the principle of social justice.

Kurikulum 2013 is a program for students to experience wide learning opportunities in attitudes, knowledge and skills to develop their abilities.

Kurikulum 2013 highlights two types of competencies: Core Competencies and Basic Competencies. Core Competencies are the main competencies used throughout the curriculum documents. They are: spiritual attitudes, social attitudes, knowledge, and skills (Nuh, 2013). The text of the Core Competencies develops through all levels. Basic Competencies are different and developed at each level and between subjects. Basic Competencies include all knowledge and skills that must be taught in each subject at each level. All Core Competencies and Basic Competencies are described for each subject and level in *Kompetensi Dasar* (Kemendikbud, 2013a; b; c). Kurikulum 2013 is not the first Indonesian curriculum to use competencies as the basis of the curriculum; competencies were also used in Kurikulum Berbasis Kompetensi (KBK, or Kurikulum 2004) and Kurikulum Tingkat Satuan Pendidikan (KTSP, or Kurikulum 2006). Kurikulum 2006 was a school-based curriculum (Prihantoro, 2015).

Graduate Competency Standards are minimum standards students must achieve to graduate from primary, junior secondary, senior secondary, or vocational school. Graduate Competency Standards include attitudes, knowledge, and skills (Kemendikbud, 2012). Each unit contains three components: minimal process ability, content, and range of use of the process and content components. Content Standards are the range of minimal materials to reach the Graduate Competency Standards. They are also arranged by subjects and levels of schooling.

Empirical basis

Factors that do not have links to the competencies are included in Kurikulum 2013 as having an empirical basis for inclusion. As noted in Kurikulum 2013, the Indonesian economy continues to grow and students need training to become new entrepreneurs. The Kurikulum also encourages students to become well-integrated Indonesian citizens, learning to end disputes rationally and not with violence. Kurikulum 2013 specifies the need for a focus at the primary school level to increase three basic abilities: reading, writing, and counting, as well as character formation. Outcomes of studies of PISA and TIMSS results indicate the need for students to focus not only on content but also other essential abilities. Students also need to know something about the challenges to the Indonesian environment, such as pollution, sources of clean water, potential food biosecurity, and global warming.

Structure of the curriculum

The curriculum is divided into three parts, primary school (Years 1-6), junior secondary school (Years 7-9) and senior school (Years 10-12). The structure of the curriculum at each level is similar and discussed in *Dokumen Kurikulum 2013* and *Kompetensi Dasar* for each level. In primary and junior secondary, subjects are classified into two groups and all subjects are compulsory; Table 1 (Kemendikbud, 2012) lists the subjects for primary and junior secondary school. Other, extra-curricular activities are also suggested, for example joining Scouts (which is compulsory in junior secondary), the school council, the health unit and Youth Red Cross.

Table 1: Subjects for primary and junior secondary levels according to Kemendikbud (2012).

	primary school	**Junior secondary school**
Group A: subjects that are more oriented towards the intellectual and affective aspects	1. Religious education 2. Pancasila and civics education 3. Indonesian 4. Mathematics (5. Science) (6. Social science)	1. Religious education 2. Pancasila and civics education 3. Indonesian 4. Mathematics 5. Science 6. Social science 7. English
Group B: subjects that are more oriented towards the affective and psychomotor aspects (includes local content)	1. Cultural arts and skills 2. Physical education, sport and health	1. Cultural arts and skills 2. Physical education, sport and health 3. Vocational subjects

The curriculum for primary school stipulates that Science and Social Science should not be taught as separate subjects; their content "is integrated in the subjects Pancasila and civics education, Indonesian and Mathematics" (Kemendikbud, 2012, p. 14). Because of this, a thematic approach is suggested when competencies for two subjects are similar. Examples of various themes are listed in the appendix of Kemendikbud, (2013a).

The description of the Indonesian curriculum for junior secondary can be found in *Kompetensi Dasar SMP* (Kemendikbud, 2013b). This document includes information on the curriculum structure and study load, and the organisation of basic competencies for each subject, including Core Competencies for junior secondary with Basic Competencies for the Science subject. In senior secondary, subjects are split into two groups: the compulsory and elective. Many subjects from junior secondary are still compulsory (but not Science or Social Science) and students can choose elective subjects (e.g., Mathematics and Science Electives include Mathematics, Biology, Physics, and Chemistry). The curriculum also includes the time allocation for teaching per week for students at all levels and the duration of one teaching period.

THE AUSTRALIAN CURRICULUM

In Australia, state and territory governments are responsible for primary and secondary school education, and for preparing the curriculum. However, the need to prepare a national school curriculum was agreed to by all state and territory governments in 2008. The Australian Curriculum, Assessment and Reporting Authority (ACARA) was created by the Australian Parliament with the enactment of the *ACARA Act (2008)* (ACARA, 2012). One of the functions of ACARA is to prepare the national school curriculum with content and achievement standards (i.e., the Australian Curriculum). ACARA also works to include other strategic directions as identified in the Melbourne Declaration (MCEETYA, 2008).

Philosophically, "the Australian Curriculum is designed to develop successful learners, confident and creative individuals, and active and informed citizens" (ACARA, 2016). The philosophical basis of the Australian Curriculum is stated in the goals of the Melbourne Declaration (MCEETYA, 2008).

ACARA (2016) specifies the structure of the Australian Curriculum as the same for the eight learning areas (subjects): English, Mathematics, Science, Health and Physical Education, Humanities and Social Sciences, The Arts, Technologies, and Languages. The structure of the curriculum documents is the same for Foundation to Year 10 (primary to junior secondary); the structure is different for Years 11 and 12 (senior secondary). The Foundation-Year 10 curriculum develops knowledge, skills and understandings of the subjects; general abilities; and cross-curriculum priorities:

- General abilities are an integrated and inter-connected group of knowledge, skills, behaviours and dispositions that are applied between all subjects: Literacy; Numeracy, Information and Communication Technology Capability; Critical and Creative Thinking; Personal and Social Capability; Ethical Understanding; and Intercultural Understanding.
- Three cross-curriculum priorities will be developed through relevant subjects: Aboriginal and Torres Strait Islander Histories and Cultures; Asia and Australia's Engagement with Asia; and Sustainability.
- Achievement standards and content descriptions are important elements of the learning areas (subjects) in the curriculum.
- Achievement standards for each subject describe the learning by students for each year level. The focus of the achievement standards is to develop a teaching-learning program by the teacher. Teachers can supervise the learning of students and assess the progress and achievement of students with the use of work samples.
- Content descriptions describe the content that is to be taught by teachers and learnt by students. Content description includes the knowledge, understandings and skills for each year level. There are also elaborations in the choice of content for the teacher to decide which one is to be used for teaching.

Structural consistency throughout the curriculum is ensured by the division of subject areas into subjects, strands, sub-strands, and threads presented as learning sequences across the years of schooling. This structure will now be examined in the context of the science curriculum.

COMPARISON OF KURIKULUM 2013 WITH THE AUSTRALIAN CURRICULUM

The Indonesian Kurikulum 2013 and the Australian Curriculum are two modern curriculums but they have different approaches. *Dokumen Kurikulum 2013* is written with much detail, including the basis and developmental principles founded in educational theory. At this level, the Australian Curriculum does not have as much detail as Kurikulum 2013. Both curriculums are developed around common frameworks. The framework for Kurikulum 2013 makes use of core competencies between subjects and levels of schooling. The Australian Curriculum is also developed according to a framework but this only becomes obvious when comparing the various subject-level documents, because they are not produced together. Some subjects have not yet been developed by ACARA and schools make use of the existing documents developed by

each educational authority. The main difference between Kurikulum 2013 and the Australian Curriculum is the use of competencies, especially the Core Competencies. There are four competencies which can be summarised as the spiritual attitudes competency, social attitudes competency, knowledge competency and skills competency (Nuh, 2013).

- The first Core Competency of Kurikulum 2013 refers to the religious doctrines that are practised by Indonesian students. This is not included in the Australian Curriculum.
- The second Core Competency is the social attitude competency and refers to the bases of Indonesian culture (e.g., *gotong royong*[2]), especially as they relate to society and the existence of students. In the Australian Curriculum there are general abilities that relate to the lives of students as learners.
- The third and fourth Core Competencies are about the knowledge and skills for each subject. They have the same function as the content descriptions in the Australian Curriculum where they are not written as competencies.

The next layer of documentation of Kurikulum 2013 is the documents entitled *Kompetensi Dasar* for primary, junior secondary and senior secondary schools (Kemendikbud, 2013a; b; c). The Basic Competencies for each subject and year are contained in these documents. The content for each subject is expressed as competencies that must be attained by the students. In the Australian curriculum there are also documents for each subject for Foundation-Year 10, for example the *Australian Curriculum: Science* (*ACS*) (ACARA, 2015). However, the curriculum content is written as content descriptions and elaborations, not as competencies or outcomes. The structure of *ACS* will be described below.

The Graduate Competency Standards in Kurikulum 2013 are the minimum levels students must attain to graduate from primary, junior secondary, or senior secondary school. In the *ACS*, achievement standards for students are described for each subject for each year level but they are not used to determine if students graduate from primary or junior secondary school. Kurikulum 2013 does not contain features that resemble cross-curriculum priorities to be developed through the subjects as in the ACS. Sustainability is included in the science curriculum of Kurikulum 2013, although the curriculum wording is: "the development of attitudes of concern and responsibility regarding the social and natural environment" in science and social science (Kemendikbud, 2013, p. 2). Sustainability is considered by Prihantoro (2015) as integral to environmental education to be taught across the curriculum in each subject but particularly in science and social science.

In the Australian Curriculum for senior secondary classes, the structure of the subjects resembles the structure for subjects in primary and junior secondary. There are also more subjects. For example, in the science area there are four subjects: Biology, Physics, Chemistry, and Earth and Environmental Science. As of the date of writing this paper, the curriculum for all senior secondary subjects has not yet been written by ACARA for the Australian Curriculum.

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[2] Mutual assistance

Kurikulum 2013 and Ilmu Pengetahuan Alam (IPA, Science)

Kurikulum 2013 proposes three approaches to teaching IPA (science) at each level of schooling. In primary school, science is to be taught as an integrated subject with Pancasila and Civics Education, Indonesian and Mathematics. In junior secondary school, IPA "is developed as the subject *integrative science . . .* not as the science disciplines" (Kemendikbud, 2013b, p. 2).[3] In senior secondary school, three elective subjects are offered: Biology, Physics and Chemistry.

Integrative science for junior secondary

There is not much written about *integrative science* in the document *Kompetensi Dasar SMP* (Kemendikbud, 2013b), and not all of the Basic Competencies demonstrate integration. In 3.9, quoted below, for example, content comes through knowledge of electricity from the Physics discipline and knowledge of the human body from the Biology discipline.

> 3.9 Recognise the concept of static electricity, electrical potential, electrical conductors, electricity in the nervous system, electricity in the heart, electricity in the skeleton, and animals that contain electricity (Year 8, Kemendikbud, 2013b, p. 52)

Use of the term 'integrative' is unusual, particularly in the sense of integrative science rather than integrated science. Integrated science is generally used to imply that the content of the course comes from across the disciplines, as demonstrated above. Integrative science has been used elsewhere[4] to imply inclusion of social and cultural (including cross-cultural) aspects as well as scientific understandings. From this perspective the whole of Kurikulum 2013 may be considered as integrative because Core Competencies 1 and 2 throughout refer to the religious, social and cultural basis of education in Indonesia.

A teacher's guidebook is published by Kemendikbud for each year of IPA in junior secondary. Each guidebook (e.g., Kemendikbud, 2014) serves two functions. The first function is about teaching, learning, and assessing IPA as well as Assessment of Core Competencies 1 and 2. The second function identifies science teaching strategies for each year level by using the student book.

Australian Curriculum: Science and comparison with IPA in Kurikulum 2013

Roberts (cited in Fensham, 2016) believes two visions underpin scientific literacy, which can be enacted through different approaches to the curriculum:

- In Vision 1 the scientific disciplines are seen as the source of school science. This vision is typical of most curriculums to date.
- Vision 2 considers real world contexts involving science and technology as the primary source of school science.

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[3] As with other extracts from Kemendikbud publications, this was originally written in Indonesian, but the term 'integrative science' is written in English.

[4] For example, the Institute for Integrative Science and Health, www.integrativescience.ca/

Fensham (2016) states that the Australian Curriculum: Science adheres to the Vision 1 axiom, although the advisory group attempted to use the Vision 2 axiom to determine the content of the Science understanding strand. In science in Kurikulum 2013, the Indonesian writers have, perhaps inadvertently, made some inroads into Vision 2 considerations by attempting to include integrative science and real world contexts in the junior secondary curriculum. This initiative is not supported in the senior school science curriculum which reverts back to being discipline-based.

Several features appear in the ACS that do not appear in Kurikulum 2013, such as an overview including rationale, aims, and key ideas. ACARA (2015) states that there are six key ideas in the science curriculum: patterns, order and organisation; form and function; stability and change; scale and measurement; matter and energy; and systems. The IPA has four major themes (Kemendikbud, 2014): materials, systems, change, and interactions. These two sets of ideas are somewhat similar. ACS has three interrelated strands: science understandings, science as a human endeavour, and Science inquiry skills, although the ACS suggests that these three strands should be taught with the integrated method, similar to Kurikulum 2013. Science understanding is further divided according to disciplines: biological science, chemical science, physical science, and Earth and space science, Science understandings are similar to Core Competency 3 in Kurikulum 2013, which concerns knowledge, and science inquiry skills are similar to Core Competency 4, which concerns skills. There is a description in ACS for each year of Foundation to Year 10 about content that is to be taught, content descriptions and elaborations, and the achievement standards for each year.

Many topics are the same for the Indonesian and Australian junior secondary science curriculum; although the names of the topics are not the same and may not include the same skills or applications of the knowledge. There is more emphasis on Earth and space science in ACS than in Kurikulum 2013 whereas more emphasis is given to human body systems in Kurikulum 2013 than in ACS. Also there are several topics from Kurikulum 2013 that are not yet included in the students' text books.

KURIKULUM 2013: A HISTORY OF CONTROVERSY

Kurikulum 2013 was launched in the second term of President Susilo Bambang Yudhoyono by the Minister for National Education and Culture, Mohammad Nuh, with encouragement from Vice-President Boediono, in December 2012. In October 2014, Joko Widodo was elected as the new president, and he appointed Anies Baswedan[5] as Minister for Education and Culture. In December 2014 Minister Baswedan ordered that:

> Units of primary and secondary education that have implemented Kurikulum 2013 since first semester of school year 2014/2015 are to return to implementing Kurikulum 2006 starting from second semester of year 2014/2015 until there is a regulation from the Ministry of Education and Culture about implementation of Kurikulum 2013. (Section 1, Regulation of the Ministry of Education and Culture of the Republic of Indonesia, Number 160 of 2014)

The regulation also states:

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[5] Anies Baswedan was replaced by Muhadjir Effendy in July 2016.

Units of primary and secondary education that have already implemented Kurikulum 2013 for three semesters are to continue implementing Kurikulum 2013. (Section 2, Regulation of the Ministry of Education and Culture of the Republic of Indonesia, Number 160 of 2014)

According to Baswedan, the main reason for the change in policy was incompatibility between the goals of the curriculum with the textbooks, as well as a lack of readiness of schools and teachers (Budiari, 2014). Baswedan also said that 6,221 schools could continue with Kurikulum 2013 and be trial schools for the implementation of that curriculum. "They can become examples for schools that are not yet ready," said Baswedan ("Mulai semester genap", 2014). More than 200,000 schools would revert to Kurikulum 2006.

In an interview for *Tempo English* ("Anies Baswedan", 2014, p. 78), several comments were made by Baswedan about the implementation of Kurikulum 2013: "In principle, curriculum must go through changes"; "The curriculum itself is good. The main problem is the hurried implementation." Baswedan believed that implementation of the curriculum should occur over seven years. According to Ministerial Regulation No. 160 of 2014, schools "can implement Kurikulum 2006 until teaching year 2019/2020" (Paragraph 4). "Professor John", who was on the Kurikulum 2013 advisory board, said "the government believed that curriculum should be revised or changed in 5 to 10 years" (Ramli, 2014, p. 82), and "in my opinion if the new Minister wants to introduce a new curriculum he should prepare it within 3-4 years" (Ramli, 2014 p. 86). The ability of teachers to teach according to the new pedagogy of Kurikulum 2013 has also been questioned. Minister Baswedan said:

So, those who need to be trained to implement that curriculum are not just the teachers, but the school's entire ecosystem . . . We are preparing a number of schools as models. Then we bring teachers from other schools to teach in those schools for a certain period. They will see directly how the curriculum is being properly applied . . . Those schools [the 6221 mentioned before] will be test cases and models, training places for teachers. ("Anies Baswedan", 2014, p. 80)

So the Minister has a plan to improve the skills of teachers. Teachers have been improving their qualifications, but more training is needed for primary school teachers and to create good skills in all areas of the country (Suharti, 2013). Bjork (2013) believes that many Indonesian teachers think of themselves as government servants, not educators. Professional development has not yet been achieved for teachers in Indonesia, especially in poor and remote areas. In January 2016, Baswedan said that competency assessments of teachers showed that the government had already successfully trained 2.9 million teachers (Nugroho, 2016), which enables approximately 25 percent of schools to implement Kurikulum 2013 from 2016.

Another important problem facing the Indonesian school system is the availability of textbooks which are compatible with the new curriculum's objectives. In Indonesia, the Ministry of Education and Culture is responsible for the preparation of the new textbooks for Kurikulum 2013. Many new textbooks had been printed before the Minister stopped the use of the curriculum in 2014.

Revision of the books . . . was based on improvements from experts and society that were completed at the end of October 2015 . . . He mentioned that they revised as many as 377 books and confirmed they would be finished in February 2016.

> Hopefully, these books can be used in school year 2016/2017. ("Kemdikbud revisi", 2016)

Several textbooks had been extensively revised, especially to incorporate changes to the themes for primary school in Years 1 to 6. There were other reasons, too, which are not examined in detail in this paper, which caused delays in the implementation of Kurikulum 2013, including:

- Too much work for the students
- Few teaching resources in many schools, especially those in poor or remote areas. Many Indonesian schools do not yet have online connections to the Internet. In fact, some schools do not even have electricity.
- The philosophy was too similar to the Islamic religion, especially in connection with Core Competency 1.

Concerns about the science curriculum

Ramli (2014) highlights several problems with the science content and pedagogy in primary school and junior secondary.

- In primary school, Kurikulum 2013 provides for no science or social science content in Years 1-3, and in Years 4-6 teachers are expected to teach science in an integrated way with the Indonesian Language. There is a list of themes in Kemendikbud (2013a) but not all themes have science content.
- In junior secondary school, teachers are expected to teach *integrative science*, but they have no training to do so.
- Researchers think that the science content has been reduced and the consequence will be that student performance in TIMSS and PISA will not be improved.
- Lack of scientific literacy has been highlighted as a potential problem that will affect the development of Indonesia.

Concerns about the Australian Curriculum

Kurikulum 2013 is not the only curriculum to cause controversy. In 2014, the new conservative government ordered a review of the Australian Curriculum (Review of the Australian Curriculum, 2014). One finding was that the Australian Curriculum had too much content, including content targeting general abilities and cross-curriculum priorities. One issue highlighted in the report that resonates with Kurikulum 2013 is the need to incorporate a moral dimension to the Australian Curriculum; that is, it contains cross-curriculum priorities about Asia and Indigenous Australians but not enough attention to "the impact of Western civilisation and Judeo-Christianity on Australia's development, institutions and broader society and culture" (Review of the Australian Curriculum, 2014, p. 5). These issues were considered important to enable students to understand the spiritual and moral dimensions of Australian life. These dimensions are included in Kurikulum 2013 (e.g., Core Competencies 1 and 2).

CONCLUSION

A new curriculum called Kurikulum 2013 was introduced to all Indonesian schools in 2013. The same curriculum framework was used throughout Kurikulum 2013 for all subjects for all year levels. Kurikulum 2013 is based on two levels of competencies: Core

Competencies and Basic Competencies. There are four Core Competencies for all subjects and all year levels. Those Core Competencies are similar and evolve through the curriculum between years. Core Competency 1 refers to the religious doctrine followed by Indonesian students. Core Competency 2 is competency of social attitudes and shows attitudes of Indonesian culture that are especially related to the society and experience of students. Core competence 3 and Core Competency 4 are about the special knowledge and skills of each subject. Basic Competencies change according to the subject and year level. Many Basic Competencies relate to two other documents: *Standard Graduate Competencies* and the *Content Standards*.

The teaching of Ilmu Pengetahuan Alam (science) in Kurikulum 2013 varies according to the level of school. In primary school, in Years 1-3 there is no science content in the curriculum, and in Years 4-6 teachers are expected to teach science integrated with other subjects, rather than as a separate subject. In junior secondary, the teacher is expected to teach, as a discipline, integrative science. In senior secondary there are three subjects: Biology, Chemistry and Physics. Science content at junior secondary level in Kurikulum 2013 and its pedagogy are similar to those prescribed in the Australian Curriculum: Science is at the same level. In December 2014, use of Kurikulum 2013 was withdrawn by the Minister of Education for most schools. This curriculum underwent improvement and, by mid-year 2016, it was back in use by 25 percent of schools in Indonesia.

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Indonesian abbreviations

	Indonesian	*English*
IPA	Ilmu Pengetahuan Alam	*Science*
IPS	Ilmu Pengetahuan Sosial	*Social education*
KBK	Kurikulum Berbasis Kompetensi, Kurikulum 2004	*Competency-Based Curriculum, Curriculum 2004*
Kemenag	Kementerian Agama	*Ministry of Religion*
Kemendikbud	Kementerian Pendidikan dan Kebudayaan	*Ministry of Education and Culture*
KTSP	Kurikulum Tingkat Satuan Pendidikan, Kurikulum 2006	*Curriculum 2006*
Mendikbud	Menteri Pendidikan dan Kebudayaan	*Minister of Education and Culture*
PNRI	Pemerintah Negara Republik Indonesia	*Government of the Republic of Indonesia*
PPKn	Pendidikan Pancasila dan Kewarganegaraan	*Civics and Citizenship*
SD	Sekolah Dasar	*Primary School*
SMA	Sekolah Menengah Atas	*Senior High School*
SMK	Sekolah Menengah Kejuruan	*Vocational High School*
SMP	Sekolah Menengah Pertama	*Junior High School*

Note: The author accepts responsibility for the majority of translations from Indonesian used in this paper and apologises for any misinterpretations he had made.

Implementation of attachment theory into early childhood settings

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Because numerous studies show that early child-adult attachment significantly affects a child's socio-emotional and cognitive development, we propose that establishing attachment-based child care can contribute to a healthy and happy childhood. This proposition is part of a new theoretical and experimental field and, thus, research is limited. There is a lack of clarity in definition, criteria, and common terminology of this type of child care. By synthesizing the literature around the attachment-based interventions in early child care centres, this review provides a conceptualization of attachment-based child care. Based on research findings, major components of this type of child care are: training for caregivers on attachment theory and sensitivity; employment of an appropriate policy, such as the appointment of a key person; a small child-adult ratio; and collaboration with parents that includes education about secure attachment and sensitivity.

Keywords: child attachment; primary caregiving; sensitivity; emotional availability; child-caregiver

INTRODUCTION

The healthy development of infants depends on quality of care and on early relationships. Young children whose physiological and psychological needs are satisfied develop self-confidence (Cassidy, 1988), advanced cognitive abilities (van Ijzendoorn, Bard, Bakermans-Kranenburg, & Ivan, 2009), and self-regulation capacities (Bernier, Carlson, & Whipple, 2010; Shulman, Elicker, & Sroufe, 1994). The first three years of life are crucial for social-emotional and cognitive development and overall mental health (Balbernie, 2013; Follan & McNamara, 2014). During this period, the brain is the most active (Dobbing, 1997). Early experiences involve perceptions, emotions, and behaviours, and shape a child's implicit memory and mindset (Siegel, 2001). Schore (1997, 2000a, 2000b, 2001a, 2001b) studied the neurobiology of early attachment and found that the primary caregiver's care affects the child's maturing limbic system and flexibility of mental health. He provided evidence of how early attachment experience influences the development of the right hemisphere. For

example, during face-to-face infant-mother[1] interactions, a child's brain experiences significantly increased levels of dopamine that positively impacts the right brain (Schore, 2015). Insecurely attached children display a high level of the stress hormone cortisol, excessive amounts of which is harmful and can lead to serious health problems (Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996). Therefore, abnormalities in care and relationships in early childhood periods have a strong impact on future life. Deviations in social-emotional or cognitive development of young children are risk factors for psychopathology (Karr-Morse & Wiley, 1997; Sroufe, Carlson, Levy, & Egeland, 1999). By contrast, emotionally attuned child-mother relationships, and sensitive and timely responsiveness to a child's needs creates a happy, healthy, and functional individual.

There are an increasing number of mothers in the workforce in many Western countries. To illustrate, in 2013 there were 72 percent of women in the UK workforce compared to 67 percent in 1996 (UK Office for National Statistics, 2013) and in Australia 81 percent in 2009-10 compared to 71 percent in 1997 (Australian Bureau of Statistics, 2011). The consequence, of course, is that many children are separated from their mothers during the day. According to the US Census Bureau (2011) more than 50 percent of women in the US return to work before their first child is three month old. As a result, many young children attend early child care centres. This reliance on child care centres occurs at a time when, according to the National Institute of Child Health and Human Development [NICHD], only 10 percent of early child care services in the US have high-quality care; the rest are rated as fair or poor (NICHD, 2006). As well, a greater number of insecurely attached children can be found in centre-based care compared to home-based care.

The quality of child care is an important factor for a child's psychological well-being and feeling of happiness; thus it can either contribute towards the development of mental disorders or prevent them (Balbernie, 2013; Ratnayake & Bowlay-Williams, & Vostanis, 2014). Child care can boost the development of children from high risk families. It was found that children with insecure attachments to their mothers can be securely attached to nonparental caregivers at high quality, safe and extensive early child care centres (Cárcamo, Vermeer, van Veer, & van IJzendoorn, 2016; NICHD, 1997; NICHD, 1999). The worst scenario for young children is when maternal insensitivity is combined with a low quality child care, which exposes these children to more insecurity and future emotional and cognitive problems (NICHD, 1997; NICHD, 1999). Nurturing and supportive relationships with nonparental caregivers can compensate for flaws in parental care (Geoffroy et al., 2007). Moreover, insecure children in good child care perform better in cognitive and language tasks compared to insecure children in maternal care (Spieker, Nelson, Petras, Jolley, & Barnard, 2003). Thereby, attachment-based child care can significantly reduce the occurrence of insecure attachments and improve quality of childhood.

The study of attachment-based child care is a new theoretical and experimental field. For this reason research studies are currently quite limited (Beyazkurk & Kesner, 2005; Shaver & Mikulincer, 2010). Specifically, there are no scholarly references that would provide analysis or comparative perspectives of the research findings where attachment theory was

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[1] The term "mother" in this paper means the primary caregiver who is the first attached figure for the child. "Caregiver" refers to a professional caregiver. "Adult" means any adult whether parent or professional caregiver.

implemented into early child care. Also, there is a lack of conceptual clarity in a definition, criteria, and common terminology of this type of child care. Interestingly, most authors of the studies that were found in our literature review claimed that they were pioneers in the field and were obviously unaware of each other. Nevertheless, the findings of these separate studies are valuable for drawing a bigger picture of what attachment-based child care is, and what its main principles and necessary requirements are. Therefore, the main goal of the present paper is to provide a comprehensive understanding of child care centres based on attachment theory. The novelty of this theoretical study is in the conceptualization of attachment-based child care into a uniform paradigm that is supported by research findings.

The purpose of these endeavours was to give insights to practitioners in childcare settings on how the attachment theory approach can be implemented into early childcare practise with a special emphasis on the professional education of childcare staff and the policy that would enhance secure child-caregiver attachment. Furthermore, this paper provides new ideas for experiments about primary caregiving, developing caregivers' sensitivity or emotional availability, and children's secure attachment within the early child care setting.

SECURE ATTACHMENT AND CHILD DEVELOPMENT

The quality of infant-adult attachment has irreversible consequences on child development, stimulating either a self-confident and emotionally stable personality with great capacities for learning or an individual with social-emotional, behavioural, and/or cognitive problems (Bowlby, 1973; Busch & Lieberman, 2010; Granot & Mayseless, 2001; Jacobsen, Edelstein, & Hofmann, 1994; Prior, Glaser, & FOCUS, 2006). Secure attachment plays an important survival function (Bowlby, 1982/1969, 1988). A child seeks protection from his attached figure in stressful and frightening situations. Because of infant-adult proximity, a child can rely on the adult in times of need, which makes his or her world comfortable and secure (Zeanah, Berlin, & Boris, 2011). The securely attached child develops a sense of worth and healthy self-confidence (Cassidy, 1988), better social skills and ego-resilience (Shulman et al., 1994). On the other hand, a child with insecure attachment, whose needs in proximity and warm relationships were not recognized, develops a negative self-concept and lack of confidence (Cassidy, 1988). In addition, type of attachment determines the way children express their emotions (Sherman, Stupica, Dykas, Ramos-Marcuse, & Cassidy, 2013). Securely attached children freely express their negative emotions because they are not afraid of losing proximity with attached figures. Insecurely attached children express either the lowest level of negative reactivity (insecure-avoidant) to avoid rejection or heighten their negativism (insecure-ambivalent) to make sure adults are available.

Securely attached children see their mothers or other key figures as a secure base for exploring the world and learning from the environment (Bowlby, 1988). Research revealed that sensitive and responsive care significantly contributes to language and cognitive development (NICHD, 2000; van Ijzendoorn et al., 2009). Granot and Mayseless (2001) showed that attachment security was linked to better adjustment to school. According to their study, children with avoidant and disorganized attachment have the lowest level of emotional, social, and scholastic adjustment and the highest level of behavioural problems and peer rejection. Higher level of self-regulation, which includes better attentional focusing, working memory, and inhibitory control, is more common for securely attached children and

predicts school achievements and mathematical scores (Ponitz, McClelland, Matthews, & Morrison, 2009). Similarly, the insecurely attached children are characterized by having difficulties with imaginative and creative play (Read, 2014). These children are anxious and focused on possible threats in uncertain conditions, which lead to limitations in engaging in cognitive exploration of the world (Ainsworth, Blehar, Waters, & Wall, 1978; Lieberman & Pawl, 1990; Mikulincer, Shaver, & Pereg, 2003). Different attachment styles can predict different cognitive responses. Secure individuals have less negative memories and attributions, and they are more active, constructive, and creative when compared to insecure ones (Mikulincer et al., 2003).

DESCRIPTORS OF SECURE ATTACHMENT

One of the main conditions for secure attachment is a mother's or other primary caregiver's *sensitive responsiveness*, which means that she or he understands a child's signals and feelings, and provides a timely and appropriate response. According to Ainsworth (1967) "sensitivity of response to signals implies that signals are perceived and correctly interpreted and that the response is prompt and appropriate" (p. 397). It was shown that maternal sensitivity and responsiveness significantly correlates with children's attachment security (Howes & Wishard Guerra, 2009; NICHD, 1997; Oliveira, Fearon, Belsky, Fachada, & Soares, 2015). Mothers' sensitivity is positively linked to children's verbal and overall IQ (Biringen, 2005; Busch & Lieberman, 2010). Children who have sensitive mothers have a lower level of aggression and victimization (Biringen, 2005). A Canadian study found that sensitive mothers have higher working memory, impulse control, and set shifting than non-sensitive mothers (Bernier et al., 2010).

Gerber, Whitebook, and Weinstein (2007) demonstrated that sensitivity of professional caregivers was associated with their accreditation status, smaller centre size, and overall quality of the child care. A meta-analysis of 29 attachment-based interventions showed that enhancing caregivers' sensitivity is a highly effective way to improve child-adult attachment relationships (Bakermans-Kranenburg, van Ijzendoorn, & Juffer, 2003). The researchers concluded that changing caregivers' sensitivity is easier than directly changing children's insecure or disorganized attachments. Accordingly, all the interventions in early child care within attachment theory's framework found in our search targeted the development of maternal or professional caregivers' sensitivity. Another term used to describe sensitivity is *emotional availability*. There is confusion in distinguishing "sensitivity" and "emotional availability." In most of the works, the terms are identical or interchangeable (see, e.g., Biringen, 2005; Ebbeck, Phoon, Tan-Chong, Tan, & Goh, 2015). We, therefore, conclude that *sensitivity* and *emotional availability* are synonyms to describe the ability to recognize a child's psychological needs and to provide an appropriate, timely, and affectionate response.

Another important principle that determines secure child-adult attachment relationships is *primary caregiving*, which characterizes proximity between a caregiver and child or a caregiver and small group of children (Kovach & De Ros-Voseles, 2015). The primary caregiving model helps children to be engaged in special relationships with a key person who understands their needs. The primary caregiver in a child care centre becomes a secure base for the children while the children are in the child care centre (Edwards & Raikes, 2002). The children develop trust and secure attachment to him or her "knowing that the primary

caregiver is there to respond appropriately to their unique temperament, needs, and interests" (Ebbeck et al., 2015, p. 234).

Howes, Angeles, Galinsky, and Kontos (1998) were the first to highlight the three criteria of primary caregiving: physical contact, consistency of care, and emotional communication. Later, Theilheimer (2006) added the following practices into the primary caregiving criteria: a) home visiting (caregivers interact with children in their homes to build a better communication with families); b) remaining with the same caregiver for at least three years; c) considering child's cultural diversity (e.g., a Spanish-speaking caregiver is paired with a Spanish-speaking child, or a caregiver learns several words in a child's native language); d) knowledge about child's preferences and home routine (e.g. how the child likes to fall asleep, how she reacts to touches, what are his transitional objects); e) established good-bye rituals (to help ease separation anxiety); f) caregiver's team work (distribution of responsibilities); g) stability of child care's personnel.

METHOD

To identify studies related to attachment-based interventions in early childhood setting, we searched ERIC and Google Scholar databases. By using a combination of key words *child care* and *attachment* our search in ERIC database identified 414 peer reviewed studies which were stratified into 25 descriptors (e.g., "Attachment Behaviour," "Parent Child Relationships," "Mothers," "Infants," "Child Development," "Foreign Countries"). We then reduced the results to 51 by choosing the descriptor "Child Care." Only one article related to the attachment-based intervention in early child care (i.e., Ebbeck et al., 2015). Using a phrase "*child care attachment*" that occurs in the title of the article, an advanced search of Google Scholar yielded 158 results. We reduced this number to 79 by excluding citations. Finally, only three articles were selected after we applied qualitative search (i.e., Biringen et al., 2012; Gray, 2015; Angeles, Galinsky, & Kontos, 1998).

We entered *primary caregiving* in the ERIC database because primary caregiving describes the main approach in the attachment-based child care (Margetts, 2005; McMullen & Apple, 2012; NICHD, 1996). Fourteen peer-reviewed articles appeared as a result. Only three of them related to our topic (i.e., Ebbeck et al., 2015; Lee, Shin, & Recchia, 2016; Colmer, Rutherford, & Murphy, 2011). In Google Search, the *primary caregiving* phrase identified the same related articles that were found in the ERIC database, thus we do not describe the details. The key phrase *attachment-based intervention* in the ERIC database gave 11 peer-reviewed results, none of them were related to child care and thus excluded. The same combination of the key words, *attachment-based intervention*, was used to search in Google Scholar, which provided 27 results with excluded citations; only one related to our focus (i.e., Juffer, Bakermans-Kranenburg, & van Ijzendoorn, 2008).

The earliest empirical study that was identified in our literature search was published in 1998 and the latest in 2016, therefore our final corpus of seven studies were from 1998 until 2016.

Table 1 provides details of the focal studies.

Table 1(a): Empirical studies of the attachment-based interventions in early childhood setting

Authors/ Country	Howes, Angeles, Galinsky, and Kontos (1998)/USA	Elicker, Georgescu and Bartsch (2008)/USA	Aylward and O'Neill (2009)/Australia
Sample	*Study 1:* Community based child care (n=55) Age=18 months (at time 1), 24 months (2), 30 months (3) and 36 months (4) *Study 2:* Family child care (n=72) Age=21.8 months (1) and 30.7 months (2) *Study 3:* Centre-based child care (n=36) Age=31.8 months (1) and 46.9 months (2)	Caregivers: intervention group (n=21) and control group (n=16)	High-risk families with children aged 0-5 years (n=126)
Aim	To examine if increasing caregiver's sensitivity increases children's secure attachment to their caregivers over time	To increase sensitivity and responsiveness in child care staff	To develop secure attachments between children and their parents
Intervention	*Study 1:* No intervention *Study 2:* Training for family child care workers on how to enhance child development and positive interaction with children *Study 3:* In-service training for centre-based caregivers on positive social interaction with children. Selective retaining of caregivers. Caregiver-child ratio: 1-3.5 for infants, 1-4.6 for toddlers and 1-5.5 for pre-schoolers	Four-week intervention. Video-feedback was used for daily records of child-caregiver interactions. Video clips were observed during individual and group sessions with following discussion of sensitive and non-sensitive behaviours. Descriptive cards were used to analyse caregivers' own attachment histories.	Six-month intervention. Circle of Security: Providing a "road map" to understand children's attachment-related needs. Intensive educative and therapeutic sessions for mothers weekly that included videotaping of child-mother interactions and reflection upon them, and fathers' sessions. Attachment-based child care for the children twice a week. Staff training and professional development on attachment theory, child development, principles of working with parents, developing self-awareness and self-reflection, mastering

Authors/ Country	Howes, Angeles, Galinsky, and Kontos (1998)/USA	Elicker, Georgescu and Bartsch (2008)/USA	Aylward and O'Neill (2009)/Australia
			sensitivity and responsiveness monthly
Measures	Attachment Q-Set, Howes Adult Involvement Scale, Caregiver Interaction Scale (CIS)	Adopted scales from Caregiver Interaction Scale and parent-child video interaction scales (used by National Early Head Start)	Hospital Anxiety & Depression Scale (HADS), Parenting Stress Index Short Form (PSI/SF), Emotional Availability (EA) Scales, Children's Wellbeing and Involvement Observations
Findings	*Study 1:* No changes in caregiver's sensitivity or children's secure attachments *Study 2 and 3*: Increased sensitivity in some of the caregivers. Positive correlation between enhancing caregiver's sensitivity and children's secure attachment	Sensitive and responsive caregiving predicts quality of child care	Positive behavioural changes in children. Improved family functioning. Enhanced mother-child relationships and mothers' copings with stress and anxiety. Heightened professional motivation in child care staff.

Table 1(b): Empirical studies of the attachment-based interventions in early childhood setting

Authors/ Country	Biringen, Altenhofen, Aberle, Baker, Brosal, Bennett, and Swaim (2012)/USA	Ebbeck, Phoon, Tan-Chong, Tan, and Goh (2015)/Singapore
Sample	Child-caregiver pairs: intervention group (n=33), control group (n=24). Age=11-32 months at the start of the study	Caregivers (n=8) and children (n=17) Age= 4-17 months
Aim	To examine if EA intervention for child care staff would enhance child-caregiver EA and secure attachment and emotional classroom climate	To investigate how primary caregiving would be implemented in Singapore and to examine if primary caregiving would strengthen child-caregiver secure attachment
Intervention	Education about EA, different types of attachment and keys to identify them. Training to master caregivers' emotional availability (completing EA Checklist, watching and discussing pretest videos)s	Five-month intervention. Educating caregivers about primary caregiving. 55 hours of videotaped child-caregiver interactions with the follow up observation and discussion of the videos. Ratio: 2-3 children per a caregiver

Authors/Country	Biringen, Altenhofen, Aberle, Baker, Brosal, Bennett, and Swaim (2012)/USA	Ebbeck, Phoon, Tan-Chong, Tan, and Goh (2015)/Singapore
Measures	EA Scales, Attachment Q-Sort, CIS, Observations in classrooms with video recording	Qualitative data: Interviews with caregivers, principals and parents, observations of children and analysing video recordings
Findings	Increased caregivers' structuring over time. Children became more connected and responsive to their caregivers.	Increased child-caregiver secure attachment

Table 1(c): Empirical studies of the attachment-based interventions in early childhood setting

Authors/Country	Gray (2015)/USA	Lee, Shin, Recchia (2016)/USA
Sample	Licensed family child care providers: intervention group (n=34), control group (n=17)	Infants (n=8) Age=2-24 months. Head teachers (n=2). M.A. students with a major in early education (n=8)
Aim	To examine the impact of Circle of Security Intervention on family child care providers, particularly their depressive symptoms, job related stresses, self-efficacy in dealing with challenging behaviours and self-reflection practices.	To examine primary caregiving as a framework for teaching students to understand and care for infants
Intervention	Eight-week intervention Circle of Security: Providing a "road map" to understand children's attachment-related needs. Watching educational videos. Teaching to apply attachment principles. Reflection on caregivers' own childhood Handouts with summary of sessions	Educating students about primary caregiving. Flexible daily schedule for children based on their needs. A student as a key person for 1-2 children Students' observations and weekly journaling, videotaping of caring behaviour, home visits, and the following reports of the experience. 55 hours of videotaped child-caregiver interactions with the follow up observation and discussion of the videos. Ratio: 2-3 children per a caregiver
Measures	Child Care Worker Job Stress Inventory, Depression Scale-Revised, Teacher Opinion Survey-Revised, Goal Achievement Scale, Parental Reflective Functioning Questionnaire, Caregivers' open-ended feedback	Qualitative Data: Interviews and students' weekly journals
Findings	Improved caregivers' self-efficacy and competence in dealing with children's	Students' learned skills: Building positive relationships with young children and their parents; caring practice as a team

Authors/ Country	Gray (2015)/USA	Lee, Shin, Recchia (2016)/USA
	challenging behaviour and supporting their socio-emotional development	

RESULTS

As our investigations showed, the attachment-based interventions in early child care setting are relatively new and limited. Thus, our review is qualitative rather than quantitative. All the interventions were targeting child care professionals and were highly successful. One project included education and therapy for high risk parents, which also significantly improved children's attachments to them. Five out of seven interventions used videotaped recordings to document child-caregiver or child-mother interactions with follow-up observation and discussion. The videos gave the opportunity to the caregivers or parents to notice their sensitive and non-sensitive behaviours and practice more sensitive ones. Three interventions emphasized the importance of reflection on adults' histories of early attachments which was effective in changing their patterns of non-sensitive behaviours. Two studies effectively implemented the Circle of Security Intervention that aimed to provide parents and caregivers with understanding of children's attachment-related behaviour and provide guidance of a sensitive response (Marvin, Cooper, Hoffman, & Powell, 2002). Five studies were conducted in the US, one in Australia and one in Singapore; supporting the statement that attachment theory is more familiar and popular in the West than in the East (Beyazkurk & Kesner, 2005).

WHAT IS ATTACHMENT-BASED CHILD CARE?

Read (2014) bridged attachment theory and early child care practice. She presented a helpful guide for the development of new policies and instructions in child care centres that would overhaul the early years institutions and put them on the path leading to secure child-caregiver relationships. Theilheimer (2006) outlined the principles of primary caregiving which embraced major principles of attachment-based child care. We seek to continue the conceptualization of the paradigm of attachment-based child care but with a greater emphisis on research findings than relied upon by predessors in this field of study.

Based on the results of the empirical studies described above, a child care centre that aims to enhance children's secure attachment to their caregivers meets the following criteria:

Training and professional development within attachment theory for child care staff. This is the most important step that can help establish a new type of child care with a given priority to secure child-caregiver relationships. Research shows that it is not a formal education but emotional education for caregivers that significantly increases quality of care (Aviezer, 2008; Biringen et al., 2012; Shonkoff & Phillips, 2002). All seven interventions described in our review provided evidence that education and training for caregivers within attachment theory enhanced children's secure attachment and sensitivity in the caregivers. Moreover, the training helped caregivers increase motivations and positive attitudes towards their careers (Aylward & O'Neill, 2009; Ebbeck et al., 2015). We view these outcomes as an essential

factor for employment stability, which, in turn, strenghtens trust and security in child-caregiver relationships.

The good news is that the training does not have to be prolonged in order to make significant changes in caregivers. A four week intervention conducted by Elicker, Georgescu, & Bartsch (2008) was as successful as a five month intervention conducted by Ebbeck et al. (2015). In support, the study by Bakermans-Kranenburg et al. (2003) showed that interventions with fewer contacts were more effective compared to prolonged intensive interventions. Therefore, organization of special training for child care professionals within the attachment theory's framework is not a costly investment.

Five out of seven interventions successfully used video recording of child-caregiver/mother interactions to increase adults' sensitivity/emotional availability. The video intervention was a very useful tool because it helped caregivers increase their self-reflection and self-awareness, which is the first steps in a behavioural change. Elicker et al. (2008) presented a technique for exploring caregivers' own attachment histories. First, caregivers chose cards that described their own early caregivers. Second, they described themselves as caregivers using the same set of cards. Participants got insights on what role their own caregivers played in their caring style, and reflected on how similar or opposite they were compared to their early caregivers. These are two examples of the techniques that proved their potency in increasing caregivers' sensitivity and children's secure attachments.

Caring for young children requires many duties and responsibilities; therefore, clear communication, understanding, and distribution of duties between, usually, two caregivers (primary and secondary) without engaging another staff member positively affected child-caregiver relationships. The interventions demonstrated that training on how to work as a team is a necessary part of successful practice and needs to be included in professional development for child care staff (Ebbeck et al., 2015; Lee et al., 2016).

According to the study by NICHD (1996), the higher the caregivers' education the more positive they are towards children. Hence, children benefit significantly from child care centres in which professional development and special training are a regular practice.

Lee et al. (2016) successfully implemented the primary caregiving approach as a framework for practicum of future caregivers. This creative intervention demonstrated that learning child development and care is more effective when it is combined with practice. Moreover, by learning sensitive responsiveness and primary caregiving, the students formed their caring style and professional habits in the initial stage of their careers. We consider this intervention as a highly effective attempt to build a new generation of caregivers who would prioritize building secure relationships with children. The earlier that caregivers become familiar with attachment theory and practice the easier and smoother the establishment of secure child-caregiver relationships.

Attachment-based child care requires application of a special policy. Because primary caregiving requires individualized care and a key person, a *small child-caregiver ratio* is a prerequisite. A regulated child-adult ratio is correlated with adult's responsive behaviour and children' secure attachment (Ahnert et al., 2006; Aylward & O'Neill, 2009; Ebbeck et al., 2015; Elicker, Fortner-Wood, Noppe, 1999; Howes et al., 1998). Caregivers are more likely to observe children's cues and provide timely and appropriate responses to children when the

ratio is small. The American Academy of Pediatrics and American Public Health Association recommended the following adult-to-child ratio: 1) children at age 6–18 months: one caregiver to three children; 2) children at age 1.5–2 years: one caregiver to four children; 3) children at age 2–3 years: one caregiver to seven children (NICHD, 2006). Maintaining a small child-adult ratio can also help caregivers be engaged in meaningful interactions with children, which is another core component of attachment-based child care. By storytelling, face-to-face interactions, calling by names, playing, touching, and providing undivided attention, caregivers are able to build emotional bonds with children and, as a result, foster their secure attachments (Ebbeck et al., 2015).

The next important ingredient in attachment-based child care is a *collaboration with parents*. Although, every child care centre differs by group sizes, child-adult ratio, caregivers' level of education, and socio-economic status of parents, communication with families is an imprescriptible part of developing secure child-caregiver relationships (Elicker, 1997; NICHD, 2002). Aylward and O'Neill (2009) conducted an intervention where parents at risk participated in educative and therapeutic program. The parents learned the basics of attachment theory and positive parenting, practiced sensitive responsiveness, and received group support. Such a holistic approach generated highly positive outcomes for child-parent relationships and secure attachment, and can serve as a model for programs aimed to increase parental sensitivity.

Some of the recommendations for child care centres to maintain or develop child-parent and child-caregiver secure attachments have been provided by Marty, Readdick, and Walters (2005): a) separation and reunion rituals to decrease separation anxiety and frustration in children; b) open-door policy for parents to help them participate in children's daily activities; c) encouraging breastfeeding, skin-to-skin contacts, and using carriers to enhance mothers' sensitivity and mother-child proximity; d) daily reports about children's eating, sleeping, and other activities; e) using transitional objects to help children feel familiar surroundings. In addition, Read (2014) recommended parents be advised to have loving time before child care starts to help the children feel that they are loved.

To sum up, the attachment based child care centre is a place that provides caregivers with specific training aimed to increase their sensitive responsiveness, practices a key person approach and small child-caregiver ratio, and educates parents about secure attachment and positive parenting.

DISCUSSION AND CONCLUSION

Children in high quality child care do not differ in their development from home-raised children (Ahnert, Rickert, & Lamb, 2000). Van Ijzendoorn and van Vlet-Visser (1988) found that toddlers of working mothers have richer vocabulary and more advanced language development. A study in Germany demonstrated that working mothers had more intensive social interactions with their children than stay-at-home mothers (Ahnert et al., 2000). Indeed, children raised in a child care might have specific challenges related to quality of the care but it does not mean that these children are behind in their development compared to home-raised children. Therefore, early child care settings that emphasize primary caregiving, small child-caregiver ratio, sensitive, consistent care and appropriate frequent physical

contacts can foster secure secondary attachment and significantly contribute to healthy child development.

In our view, the conceptualization of attachment-based child care is an important step in understanding the implications of Bowlby's theory into early care practice, overlooked thus far. A clearer understanding of the principles and main components of this type of child care can help shorten the distance between theory and practice. According to our framework, the major components of attachment-based child care are: education of caregivers utilizing the lessons of attachment theory and sensitivity; employing a policy, such as an appointment of a key person and a small child-adult ratio; and collaboration with parents that includes informing the parents about secure attachment and sensitivity.

Due to a shortage of attachment-based research interventions in a child care setting, our theoretical study is small-scale and qualitative rather than quantitative. Although, attachment theory and the idea of attachment-based child care are gaining popularity, more studies and interventions are needed to fill the gap between attachment theory and early child care practice.

Another limitation of the present review is a lack of cross-cultural representation of the studies. Six out of the seven interventions found in our search were conducted in Western nations (mostly in the US). In fact, attachment processes are similar in different societies. For example, in all cultures secure attachment is a prevalent attachment pattern, or maternal sensitivity is a key factor for forming secure attachment in children, or secure relationships are linked to social-emotional and cognitive competencies (for a review, see Cassidy, Jones, & Shaver, 2013). The different mentalities, religions, economies, and life styles of different societies, however, significantly affect early child-adult relationships. For instance, a Turkish study showed that caregivers' education level was not linked to child-caregiver secure attachment whereas data from the US indicated the opposite (Beyazkurk & Kesner, 2005; NICHD, 1996). Certain insecure patterns are more prevalent over other insecure patterns in different countries. For instance, insecure-avoidant type is more dominant over other insecure types in Germany whereas insecure-ambivalent is more common for Japan and Israel (Bretherton, 1992). The possible explanation of the phenomenon is that Germans value more independence in children rather than proximity, while children in Japan and Israel are exposed to many extended family members. Another illustration of cultural differences in different countries is found in the study by Cárcamo et al. (2016). They did not find a link between maternal sensitivity and family income in a Chilean sample, however this link was found in several studies conducted in US (Bradley, Corwyn, McAdoo, & García Coll, 2001; for the review, see Magnuson & Duncan, 2002, and Shaver & Mikulincer, 2010).

Attachment-based child care is a Western world product (Cassidy et al., 2013; Bell, 2012; Mikulincer et al., 2003). Therefore, all the interpretations and conclusions that we draw from the research findings presented in this paper are related to Western societies and might not be directly relevant to other societies. More cross cultural research in attachment theory and its implications should be conducted in order to project similarities and differences in childrearing and child care practices in different societies and to provide universal recommendations for attachment-based child care practices.

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Foreign language anxiety among first-year Saudi university students

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This study surveys 156 Saudi male and 131 Saudi female students in their first year at King Faisal University in the Eastern Province of Saudi Arabia. Demographic data is collected along with quantitative data using a self-reporting Foreign Language Classroom Anxiety Scale (FLCAS) with a 5-point Likert scale. English performance data is collected via course grades. Comparisons are made between genders, majors, course levels and academic terms using ANOVA and descriptive statistics. Correlations and regression assess relationships between FLCA and English performance. Results show moderate levels of FLCA and moderate, negative correlations with performance. Further qualitative data is collected in the form of feedback from foreign English instructors and university administration. Qualitative data is compared to prior research and results from the quantitative study in order to ensure reliability. The discussion and conclusion leads to recommendations for teachers and administrators with the intent of reducing FLCA and increasing educational opportunity.

Keywords: foreign language classroom anxiety; EFL, ESL, ELT; Saudi Arabia; Pedagogy

INTRODUCTION

English language training (ELT) has become commonplace in public and private schools around the world. The British Council (2013) estimates that one in four people around the world use English. By the year 2020, two billion people are expected to be using and learning English. English is one of the most important carriers of information, the most widely used language on the internet, and the language of international trade (Pan, 2011; Zazulak, 2015). The *Harvard Business Review* reports that countries with better English skills have better economies (McCormick, 2013). Thus, English language acquisition is not merely for self-improvement but also an economic necessity in our increasingly interconnected world.

No longer content with relying on oil revenues, Saudi Arabia has developed ambitious plans to expand and diversify its economy (McDowall, 2016). Education is the main focus of the strategy that is expected to, among other things, reduce unemployment, increase women's employment, develop retail and technology sectors, and, ultimately, move the country into the top 15 in the world (Al-Riyadh, 2016). Schools and universities are among the most important institutions that will give effect to the new vision. Not surprisingly, ELT has been considered fundamental to expanding students' access knowledge in sciences and technology. Most public and private universities in Saudi Arabia now use English as the language of instruction for medical, engineering, and scientific courses. Two or more Saudi universities use English as the only language of instruction (Alrashidi & Phan, 2015). As such, English has become an essential skill for

students who desire to earn degrees in technical fields and, in many cases, access to employment in these fields is restricted by language ability.

Although the Saudi government has invested heavily in English language education, student performance in the subject has failed to meet expectations, resulting in reduced education and career opportunities for Saudis who cannot survive in English-based university courses. Hence, Saudis are caught in a complicated predicament. Successful implementation of the new economic plan is largely contingent upon performance in English at a standard that enables students to obtain degrees in sciences, engineering, and medicine. Despite the crucial importance of English skills, Saudi Arabia has lingered among the least competitive nations in the world in terms of English. In fact, government investment in ELT since 2011 has only led to decreasing proficiency on the English First (EF) index (EF, 2015). In 2015, Saudi Arabia ranked third to last among 70 nations surveyed, ahead of only Cambodia and Libya.

As of 2016, the Saudi government has invested about US$22 billion in university students each year. Students at public universities pay no tuition fees and receive a monthly stipend. The government also provides scholarships for about half of private university students in the country (Hamdan, 2016). In order to improve return on investment, studies are needed to find and analyse the reasons why students have failed to meet objectives. One area that has garnered consistent attention over decades is foreign language classroom anxiety (FLCA).

PRIOR RESEARCH

FLCA is different from other types of anxiety and specifically arises from aspects of the foreign language classroom (i.e. participating, speaking, writing, grade performance, etc.). Horwitz, Horwitz, and Cope (1986) defined FLCA as "a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning arising from the uniqueness of the (foreign) language learning process." In their seminal work on FLCA, Horwitz et al. (1986) developed the most commonly used instrument for assessing FLCA: the FLCA scale (FLCAS), which is a 33-point survey with a 5-point Likert scale that learners use to self-report their feeling toward communication, test and evaluation anxiety.

Numerous authors have confirmed links between FLCA and English language performance, although associations vary between samples. Negative relationships between FLCA and language performance are the most commonly reported kind (Aida, 1994; Saito & Samimy, 1996; Salehi & Marefat, 2014; Spielman & Radnofsky, 2001). However, there are also cases where anxiety and performance are positively related (e.g. Jones, Swain, & Hardy, 1993). Alpert and Haber (1960) described "facilitative anxiety" as a drive to improve performance and "debilitative anxiety" as a hindrance to performance. How and why anxiety arises, and its potential impacts on learning have also been found to vary by culture (Horwitz, 2016).

Saudis are clearly unique in the scope of the global student population due to factors such as tuition-free higher education, English language instruction for science courses, and exposure to foreign teachers who do not speak Arabic, in addition to things that make every culture different: religion, history, climate and environment, etc. Notwithstanding the distinctiveness of Saudi students, researchers have confirmed that Saudis are no

exception when it comes to experiencing debilitative anxiety (Alasmari, 2015; Alrabai, 2014; Alsowat, 2016; Dewaele & Al-Saraj, 2015). Studies have shown Arab students usually experience moderate levels of FLCA and that anxiety shares a moderate, negative correlation with language performance.

While FLCA research has been expanding in Saudi Arabia in recent years, there is little, if any, research about how persistent FLCA is over time. How first year university students respond to the demands of English language preparatory year programs (PYP) is also largely unknown. Still, knowledge of the dynamics of student attitudes and emotions, and their interplay with language performance may be key to developing effective strategies to improving proficiency. The present research was developed bearing in mind the potential value of a study that tracks FLCA over multiple academic terms in the first year of university and assesses the relationship between FLCA and English performance.

RESEARCH OBJECTIVES

The aims of this research are to:

1) Investigate how FLCA changes among Saudi students in their first year of study at a Saudi public university;
2) Examine statistically significant variance in mean FLCA levels between males and females, between medical and non-medical students, and between students in upper and lower levels,
   Note: Students are separated into two levels following an entrance examination. Students in the "upper level" begin their studies in English 2 courses whereas students in the "lower level" begin in English 1.
3) Quantify and analyze statistically significant relationships between FLCA and English language performance.

Research questions

1) How strong is average FLCA among students in the sample?
2) Does mean FLCA change significantly between academic terms?
3) Are there any significant differences between males and females?
4) Do medical students experience higher or lower levels of FLCA as compared to non-medical students?
5) Do students in higher levels of study experience higher or lower levels of FLCA as compared to students in lower levels?
   Note: During each academic term, there are two "levels" of courses (i.e. English 1 and English 2 in the first term; English 2 and 3 in the second term, etc.)
6) Are there any significant correlations between FLCA and English performance? If yes, to what extent does FLCA predict or affect performance?
7) Can instructors and administrators confirm findings of a FLCAS survey?
8) What are common concerns and thoughts about student performance and FLCA among faculty and administration?

Limitations

Surveys were administered by a group of foreign English instructors at the King Faisal University in Saudi Arabia's Eastern Province. Convenience, logistics, budget and other factors limited the sample population to incoming freshmen enrolled in a preparatory year English program at one campus in Saudi Arabia. Although the sample size was sufficiently large to generalize results, the unique context makes it impossible to determine exactly how reliable the results are for application at scale.

Quantitative data was collected in the form of self-reporting surveys. Reliance on self-reporting could potentially affect honesty and reliability. Socially desirable responding (SDR) is a well-known phenomenon that can impact the validity of survey data (Ong & Weiss, 2000; van de Mortel, 2008). Researchers could not eliminate the potential for SDR; instead, the research was designed to mitigate SDR as an interfering variable in analyses and conclusions. For example, researchers took two survey samples: one was entirely anonymous, and the other required some identifying information in order to associate classroom performance with survey responses. Survey results were also compared to qualitative instructor and administrator feedback to avoid making erroneous conclusions.

Ethics statement

Researchers ensured the study adhered to ethical standards of the institution and relevant privacy and education laws of Saudi Arabia. Relevant university administrators were aware of the study. Participation in the survey was voluntary. Researchers informed participants that participation was confidential and that their responses would not affect any grade or performance measure. All identifying information was removed prior to representation of data.

METHODOLOGY

An exploratory study was conducted to assess foreign language classroom anxiety levels among first year university students in a preparatory year program. Two surveys were distributed in two academic quarters in order to provide information FLCAS dynamism among students in the program. Parametric and nonparametric statistics were calculated. Additional qualitative data was collected from teachers, which helped clarify reasons for FLCAS prevalence and changes between surveys.

Context

The study was conducted at the King Faisal University Preparatory Year Deanship English Program (KFUPYDEP), located in Hofuf, Saudi Arabia. KFUPYDEP has more than 70 foreign instructors who teach more than 1,000 students. The program was accredited by the Commission on English Language Program Accreditation in 2016. As part of continuing efforts to improve service quality, several foreign instructors volunteered to administer surveys and collect performance data. The head researcher (author) is also a classroom instructor at KFUPYD.

The KFUPYDEP is the entrance point for students pursuing scientific, engineering and technical degrees at the university. One year of intensive English language training at the KFUPYDEP is required for students who enter KFU to study business, computer science, engineering, dentistry, applied medicine, pharmacy and medicine. English is the language of instruction for those major programs. Depending on entrance exam results, students must complete three or four English courses in the KFUPDYEP, each of which is one academic quarter in duration. The program uses a curriculum based on Pearson-Longman's Northstar textbook series, which has four colour-coded books. Each colour represents a different level: orange is beginner, blue is intermediate, green is upper intermediate, and purple is advanced. Students whose entrance exam scores are higher may bypass the beginner course in the Fall quarter.

Each course level is structured into an eight-week academic quarter – one week per unit in the textbooks. Students attend class for four hours on Sunday through Wednesday, learning unit-centred vocabulary and grammar. Each week, students take two quizzes and submit a writing assignment. On Thursdays, students sit for written exams and give a speaking presentation. Course grades are calculated using a weighted average of course components: 5 percent for attendance, class participation, quizzes and writing assignments; 30 percent for weekly exams; 10 percent for a midterm exam; and 40 percent for the final exam as per university policy on final exams. Every student must achieve a 70 percent overall score in order to pass the course, which corresponds to a 3.0 in the grade point average (GPA) out of a possible 5.0 points. Students must maintain a minimum overall GPA of 3.0 in order to stay enrolled at KFU, so a failing PYD grade in the Fall quarter usually results in dismissal from the university on academic grounds.

Sample

The sample included 287 respondents from the KFUPYDEP. There were 185 participants in the Fall quarter and 102 participants in the Spring quarter of the 2015-16 academic year. In both academic quarters, the student body was split into two modules – upper and lower – based on entrance examination scores. Medical students were separated from students in other majors in both terms. Males and females were in separate sections as per university policy. A cluster-area sampling technique was utilized in order to include students from various groupings within the whole population.

Instruments

Foreign language classroom anxiety was assessed using the FLCAS instrument from Horwitz et al. (1986), which is the instrument most commonly used to measure FLCAS. English was the language of the survey. The questionnaire contained a 5-point Likert scale which participants use to report their level of agreement or disagreement with 33 statements. English language performance was measured by overall course scores (as a percentage) using the grading structure explained above.

Analysis

Survey data was translated into SPSS for statistical analysis and data representation. Descriptive statistics were tabulated using charts and graphs. Analysis of variance (ANOVA) was calculated to discover any significant differences in FLCA between quarters, modules, genders, and majors. Pearson correlations and linear regression

analysis were calculated to quantify relationships between FLCA and English language performance.

RESULTS

Cronbach's alpha was calculated to determine reliability ($\alpha = .944$). The instrument was found to be very reliable.

Descriptive statistics

The data were approximately normally distributed as shown by the bar graph and histogram (Figure 1), and further assessed by Q-Q plots. Across all data points, the mean FLCA was moderate at 2.82. The standard deviation of 0.72 showed that about half of the students reported anxiety on the higher end of the scale and slightly more reported anxiety on the lower end of the scale.
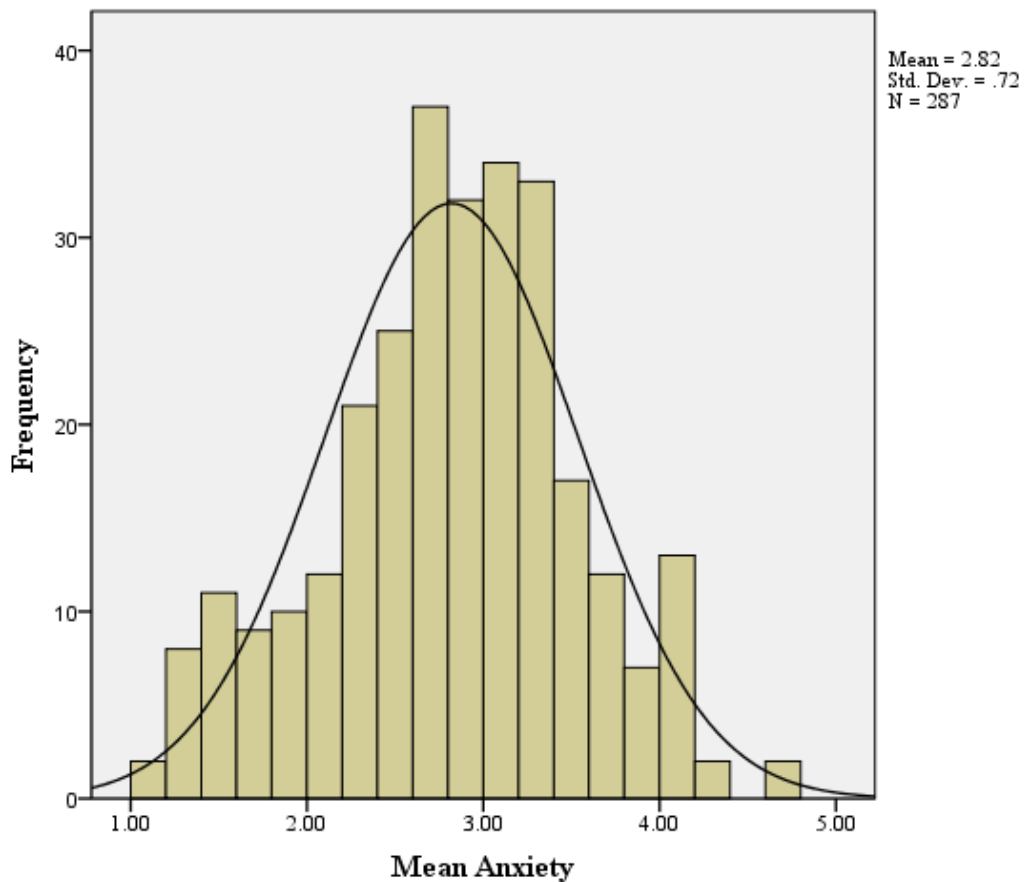
Figure 1. FLCA Distribution

Mean and median anxiety levels fell between the first and second surveys, as did minimum and maximum levels of anxiety. In both the Fall and Spring quarters, all of the data fell within three standard deviations of the mean. Table 1 contains descriptive statistics by academic term.

Table 1: Distribution statistics by term

Term	Mean	N	Std. Deviation	Minimum	Maximum	Median
Fall	3.1184	185	.59435	1.42	4.67	3.1515
Spring	2.2764	102	.60085	1.00	3.52	2.3636
Total	2.8192	287	.71954	1.00	4.67	2.8438

Males and females reported nearly identical levels of anxiety. Data from males had a broader range but slightly lower median and mean when compared to female data. Table 2 contains descriptive statistics separated by gender.

Table 2: Distribution statistics by gender

Gender	Mean	N	Std. Deviation	Minimum	Maximum	Median
Male	2.7503	156	.70987	1.09	4.67	2.7576
Female	2.9012	131	.72507	1.00	4.18	2.8788
Total	2.8192	287	.71954	1.00	4.67	2.8438

Students in the upper module reported slightly lower levels of anxiety than students in the lower module. However, data for the lower module was more tightly grouped around the mean. Table 3 shows distribution data by module.

Table 3: Distribution statistics by module

Module	Mean	N	Std. Deviation	Minimum	Maximum	Median
Lower	3.0848	120	.67093	1.36	4.36	3.1818
Upper	2.6283	167	.69403	1.00	4.67	2.6667
Total	2.8192	287	.71954	1.00	4.67	2.8438

Medical students reported slightly higher levels of anxiety than non-medical students, though the data for medical students was more tightly grouped around the mean. Table 4 compares distribution statistics between medical and non-medical students.

Table 4: Distribution statistics by major

Major	Mean	N	Std. Deviation	Minimum	Maximum	Median
Medical	2.8874	110	.63731	1.09	4.67	2.8788
Non-Medical	2.7768	177	.76488	1.00	4.64	2.7879
Total	2.8192	287	.71954	1.00	4.67	2.8438

Analysis of variance

Mean anxiety levels were compared between participants in Fall and Spring quarters, male and female sections, upper and lower modules, and medical and non-medical groups. There was homogeneity of variances among FLCAS scores in each group, as assessed by a Levene's test ($p > .05$). The only statistically significant difference that was found using a one-way ANOVA test was between students in the Fall and Spring quarters ($F_{(130, 156)} = 2.048$, $p = .000$). Students in the Fall quarter ($M = 3.12$, $SD = 0.59$) reported significantly higher FLCAS when compared to students in the Spring quarter ($M = 2.28$, $SD = 0.60$). There were no statistically significant differences found between male and female students, upper and lower modules, or medical and non-medical students. Table 5 contains ANOVA data.

Table 5. ANOVA

		Sum of squares	df	Mean square	F	Sig.
Term	Between Groups	41.457	130	.319	2.048	.000
	Within Groups	24.292	156	.156		
	Total	65.749	286			
Gender	Between Groups	32.475	130	.250	1.006	.483
	Within Groups	38.731	156	.248		
	Total	71.206	286			
Module	Between Groups	35.103	130	.270	1.213	.124
	Within Groups	34.723	156	.223		
	Total	69.826	286			
Major	Between Groups	30.186	130	.232	.962	.589
	Within Groups	37.654	156	.241		
	Total	67.840	286			

Pearson correlations

Course scores were available for participants in the Spring quarter only. A moderate, negative correlation was found between mean anxiety and English language performance that was statistically significant at the 0.01 level ($r = -.430$, $n = 48$, $p = .002$). Table 6 contains the correlation data.

Table 6. Pearson correlations

		Mean anxiety	Course total
	Pearson Correlation	1	-.430[**]
Mean Anxiety	Sig. (2-tailed)		.002
	N	287	48
	Pearson Correlation	-.430[**]	1
Course Total	Sig. (2-tailed)	.002	
	N	48	48

[**]. Correlation is significant at the 0.01 level (2-tailed).

Regression

Linear regression analysis was used to test how much FLCA influenced course scores among participants. A significant regression equation was found ($F(1, 46) = 10.437$, $p = .002$). Participants' predicted total course score was equal to 93.385 minus 4.517 times FLCAS score. This means that the maximum English score a participant could have expected was about 89 out of 100, or a high B. Students with letter grades in the B range generally had FLCA levels on the lower end of the scale whereas participants whose FLCA levels were on the higher half of the scale generally had overall course grades in the C range. FLCA accounted for approximately 18 percent of the variability in student course grades.

DISCUSSION

Results were consistent with prior research that showed moderate levels of FLCA, no significant differences between genders, and moderate, negative correlations between

FLCA and English performance. The significance of the present research is found in the decreased anxiety levels between the first and third terms. It follows other studies (e.g. Alasmari, 2015; Dewaele & Al-Saraj, 2015) that contextual factors probably played a significant part in students' higher levels of FLCA during their first months at university. Alsamaani (2012) found Saudi students have positive and realistic beliefs about language learning and, while feedback from instructors in the KFUPYDEP did not wholly contradict those findings, KFU faculty did relate that their students' attitudes and beliefs improved significantly between terms. Qualitative data affirmed a positive relationship between the length of time spent in the PYD and overall quality of student behaviour and performance. This supports Alshumaimeri's (2013) findings that completion of a PYP is likely to increase a student's motivation toward English language learning.

Despite the correlations coming from data for the second survey only, the results are still significant considering that enrolment in the KFUPYDEP decreased from 1,650 students in the Fall quarter to 1,251 students in the Spring quarter, where the decrease was due almost entirely to dismissal on academic grounds after students failed to achieve 70 percent or higher in their English course. The negative correlation between grade performance and FLCA is obvious given the higher average FLCA in the Fall quarter against a higher failure rate. Although no causative relationship can be assumed, the data clearly shows that lower anxiety levels coincide with better grades.

Qualitative feedback from instructors indicates higher FLCA in the Fall quarter. Instructors felt students who exhibited more anxiety in class tended to miss more class hours and were more reluctant to participate in class. According to instructors, anxiety was manifested as unwillingness to join discussions, answer questions and use English as a medium of communication in class. Acute writing anxiety was very prevalent according to instructors who reported high incidence of plagiarism and improper use of electronic translation software. Teacher and administrator feedback indicated that students who exhibited higher anxiety toward the English language classroom environment also complained more frequently about course responsibilities to Arabic-speaking staff.

Generally, students frequently misunderstood the concept of a deadline or the rigidity of a university academic program. While the students with higher course scores tended to learn that assignments, grades and deadlines are static and non-negotiable, the students whose grades were on the low end of the scale had more persistent difficulty in comprehending the idea that they could not bargain for grades or extensions. Saudi students are, by many accounts, used to negotiating in areas that people from English-speaking countries are not, such as grades (Pennington & Hoekje, 2010, p. 128; Springsteen, 2014). According to KFUPYDEP administrative staff, it is not uncommon for students to have high school transcripts showing 100 percent as course marks in dozens of subjects; this does not necessarily indicate mastery of these subjects but rather that the student successfully negotiated a grade by some means, bribery included. Students and administrators both confirmed that lower schools often misrepresent grades and that, following 12 years of that system, it is a shock to enter an accredited English program with Western standards. Thus, higher FLCA probably reflects an inability or unwillingness on the students' part to change their world view, namely adapting to a more accurate and reliable system of grades.

Teaching methods

Considering that there were no significant differences in FLCA between any groups within the sample, only between terms, it is not unlikely that FLCA played a significant part in the termination of many students' enrolment in university in the first term of university, which thereby limited their access to education. Taking into account instructors' and administrators' feedback, students who failed in the Fall quarter probably came into university unprepared, and their lack of preparedness may have been due to having had unrealistic grading policies throughout their years in primary and secondary education. Much, if not most of the student population experienced a form of culture shock when they entered the KFUPYDEP. Those who were not able to cope with the increased responsibility and rigidity compared to their high school years typically demonstrated higher FLCA, and many of them failed. Faculty and administrator feedback suggested that that secondary education in Saudi Arabia might have failed to adequately prepare students for English courses at university.

Studies have shown that Saudi teachers have been reluctant to adapt a style consistent with contemporary methods. Ali & Ammar (2004) found that Saudi teachers tend to cling to traditional teacher-centred classrooms rather than adopting more student-centred approaches. Hasan & Gupta (2013) found "authoritarian" models were dominant in Saudi education. Grami (2012) found the Saudi educational environment is typically structured and teacher-centred rather than communicative and learner-oriented. Gulnaz, Alfaqih, and Masshour (2015) discussed the harmful implications of the "stereotypical traditional role" that is frequently embraced by Saudi teachers. KFUPYDEP instructors commented that students frequently appeared confused in the student-centred classroom, as if they had never experienced this approach before.

Remarkably, the tendency to embrace old-fashioned methods is not only persistent among older teachers. Ali & Ammar found pre-service teachers at multiple universities in Saudi Arabia held "naïve epistemological beliefs," that they tended to "rely more on lower order cognitive strategies such as memorization and rehearsal than higher order ones such as elaboration and critical thinking," and that English teachers themselves often experienced anxiety related to learning and teaching English. Aljafen (2013) reported that English classes in Saudi high schools most often use the grammar-translation approach, which is not as effective as the communicative approach.

One of the main reasons Saudi universities developed PYPs is to help students adjust to the rigors of university life. After 12 years in ostensibly poorly managed lower schools, where teachers are most likely to practice outmoded pedagogy, students need some time to unlearn bad habits and learn new ones. PYP faculties are usually comprised of expatriate teachers who may hold expectations of undergraduate students that Saudi students do not meet (Habbash & Idapalapati, 2016). These unrealistic expectations could prompt instructors to utilize less effective teaching methods in the face of adversity. Any failures by PYP faculty members to adapt strategies consistent with the Saudi students' needs may reduce the effectiveness of the PYP, and thereby harm the students' educational opportunities.

In response to the distinct characteristics of Saudi English language learners, Chua & Al-Shammary (2015) recommended teachers utilize a student-centred approach and take every opportunity available to make the content of lessons interesting and relevant to

students. Alrabai (2015) found FLCA reduction strategies were effective in Saudi classrooms. These strategies included measures to reduce communication apprehension, reduce fear of negative evaluation, reduce fear of testing, address misconceptions that provoke anxiety, establish realistic learning objectives, and increase student self-confidence. Furthermore, while negotiation on par with Saudi high schools is obviously not feasible, Habbash & Idapalapati (2016) suggest compromising with students during the initial days of instruction. Taking a progressive approach toward attendance, tardiness and assignment deadlines for a temporary period so that students can adjust may improve the relationship between teacher and student, which could help improve student performance. Some PYPs, such as the KFUPYDEP, feature structured, inflexible curriculum and syllabi that do not allow individual instructors to apply a more personalized approach, but there are generally options available for teachers to demonstrate modest amounts of patience and understanding. If English instructors, whether foreign or Saudi, bear in mind that the ultimate objective of their work is to enhance students' abilities and opportunities, they should be able to navigate the complex array of demands and obstacles between the present position and future success.

CONCLUSION

Results from this study were consistent with other FLCAS research in Saudi Arabia. Students in the KFUPYDEP reported moderate levels of FLCA and anxiety had a moderate, negative association with English performance. There were no statistically significant differences in mean FLCA between men and women, between medical and non-medical students, and between levels. The second part of the study, taken in the Spring quarter, showed significantly lower FLCA compared to the Fall quarter. One possible reason for this reduction in mean FLCA was that roughly one-fourth of students failed out of the program between the two surveys. The other possible explanation was that time spent in the PYP improved student discipline, motivation, and study skills. The second scenario was supported by prior research and qualitative feedback from KFUPYDEP English instructors.

One of the most significant findings of the qualitative research pertained to the lack of preparedness among students entering university. PYPs across Saudi Arabia exist to give students a year to adjust for broader university studies where English is the language of instruction, but in the case of KFUPYDEP students, a large number were unprepared to enter the PYP. Prior research and qualitative feedback from KFU personnel indicates that high schools may be particularly at fault for not providing students with quality education. Administrators' main concerns included perceived unscrupulous grade inflation and lack of rigidity on matters of attendance and deadlines, which are commonplace in Saudi secondary schools, where it is not uncommon for a student to receive 98 percent and above in every class, regardless of relatively low proficiency. Administrators reported bribery was one possible cause of unreliable high school data, but research also suggested that the culture of negotiation and saving face may be more problematic. Outdated teaching methods and lack of accountability in high schools could have been directly related to the KFUPYDEP failure rate. Lack of uniform objectives and methods between universities and lower schools was a potential factor in hundreds of students losing their chance to study science or medicine at King Faisal University in the 2015-16 academic year. However, more comprehensive data is needed to make a solid conclusion regarding the role that Saudi secondary school policies and pedagogy play in university success.

Unfortunately, curriculum demands of the university do not provide KFUPYDEP instructors opportunity to play catch-up with students whose skills are significantly below average, so there are only a few measures the faculty could take to retain students whose performance does not meet standards. One such possible way to help students stay in school would be to discontinue the practice of terminating students' enrolment after only one academic term. Students whose GPA drops below 3.0 after the first term could be placed on academic probation for one term and allowed to repeat a KFUPYDEP level. Academic probation is standard practice in American universities, which understand that some students simply are not prepared for the higher standards of university in their first term, but their naiveté should not cost them their chance to earn a degree of their choice.

KFUPYDEP teachers also recommend more Arabic-speaking support staff, such as a counselling department and English tutors, in order to help students whose English skills are simply not sufficient to discuss certain issues with their foreign instructors. Arab support staff could help reinforce core academic values in the Western-standards context, such as attendance, promptness, timely submission of assignments, academic honesty, and limiting contests to grades. According to teachers, failure to perform in the KFUPYDEP was as much a product of culture shock or failure to adjust to a rigid academic standard as it was related purely to ability. If students could discuss their fears, concerns, and complaints in detail and at length in Arabic, and receive explanations and positive feedback from other fluent Arabic speakers, students' anxiety and resistance to higher English standards could be reduced.

Beyond administrative policy changes, teachers remain the key to reducing anxiety, gaining compliance, and providing students with ample opportunities to acquire higher education. Universities need highly qualified instructors who have knowledge and experience with contemporary methods. Demand for foreign teachers outpaces supply around the world, so it is unrealistic that every instructor, whether at university or a lower school, will hold qualifications necessary to obtain the same position at an American or British institution, but experience and certification are certainly crucial. Teachers need to know that the profession has moved past rote memorization, quarrelling, and the teacher-centred classroom. Students need to be engaged with authentic English content. Lessons need to be relevant and interesting. Moreover, teachers need to create a safe social and psychological environment that minimizes harmful anxiety. Various techniques and approaches are available for teachers to utilize, but without exposure to literature, teachers could revert to outdated practices. Thus, it is important that school administrators provide professional development sessions followed by peer and mentor observations so both teachers and students can benefit from the wealth of knowledge available.

FLCA potentially hinders and limits learning. Therefore, it is an antagonist of the functional classroom. Significant efforts should be taken to reduce and constrain FLCA so students can achieve at their maximum potential. Teachers and administrators should discuss psychological and social factors that affect classroom and exam performance, and develop strategies supportive of constant and continual improvement. Higher education plays a pivotal role in micro and macroeconomic development. Without college-educated citizens, a nation cannot compete and prosper. Hence, in order to accomplish the goals and objectives set by the Saudi government, educational institutions should undertake to enhance the quality of their classrooms, minimizing detrimental fears and maximizing opportunity to grow, learn, and develop.

Future research

In view of the findings of the present study, the head researcher plans to continue assessing the impacts of FLCA on English performance among KFUPYD students. In future studies, the research is likely to include direct interviews with students, whose qualitative feedback can supplement instructor and administrator opinions on personal educational histories, root causes of FLCA, potential strategies and tactics in response to anxiety in the classroom and relating to foreign language learning. Although significant barriers exist that make it difficult to incorporate other universities into a study of larger samples across a broader geographic range (i.e. communication, budget, institutional values, research qualifications of partners, etc.), such a comprehensive study would be beneficial to undertake. Presently, faculty and administration at KFUPYD have no means by which they could initiate or engage such a study, despite its obvious merits. In order to complete such an expansive piece of research, the Saudi Ministry of Education would need to be directly involved. In the process of improving Saudi English programs and universities in general, nationwide studies including secondary and tertiary educational institutions should be implemented by Saudi authorities. In the meantime, independent researchers should continue to examine factors related to performance and FLCA in order to improve understanding of Saudi students' unique backgrounds and needs.

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iTaukei Indigenous Fijian *masi* as an education framework: Retaining and adapting tradition in epistemology and pedagogy for a globalised culture

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iTaukei (Indigenous Fijians) are experiencing rapid social transformation through urbanisation and globalisation. Indigenous knowledge is being quickly eroded by its conflicts with modern Western knowledge and values. To counter this decay, there is need, in the school curriculum, for teaching methods that can help students achieve, in their own understanding, accommodations between Indigenous and non-Indigenous concepts, between modern values and expectations, and the emphasis being placed by the Ministry of iTaukei Affairs on the importance of preserving traditions.

This paper proposes an innovative iTaukei pedagogical and epistemological framework based on the traditional textile masi *(tapa), with design and motifs used as metaphors to facilitate better understanding of the conflicts between and the potential for reconciling or accommodating "outside" (Western) and "inside" (Indigenous) knowledge. At the centre of the design is the learner who must critically reflect on the possibility of a symbiosis of Western and Indigenous knowledge. The* masi *framework could prove a powerful tool for educators dealing with the dilemmas of social change in an oral culture like the iTaukei.*

Keywords: iTaukei Indigenous knowledge; Yaubuliti framework; pedagogy; epistemology; melding; educational tool; social change; reflexivity

INTRODUCTION

This paper presents a framework of *masi*[1] (*tapa*) design as a metaphor to demonstrate the impact non-indigenous knowledge systems have on Indigenous knowledge (IK) in formal and informal settings. The different motifs in the design help learners and teachers understand the flow of knowledges and the strategies to adopt to control the nature and scope of change or to reconcile and possibly synthesise concepts in indigenous and non-indigenous knowledge. Using the *masi* can be useful for in- and pre-service teachers, curriculum developers; and can help guide learners to make decisions on what they believe is culturally and environmentally sustainable, strengthen inter and intra-relationships, and provide life-skill security in modern living. The framework is the sum of Indigenous and Western pedagogical and epistemological understanding, which are often viewed as disparate information and difficult to understand by the iTaukei. A *masi* design and motifs, can simply and logically explain the importation of non-Indigenous

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[1] The word *tapa* is Polynesian in origin; *masi* is the equivalent Indigenous Fijian word.

values and ideas that need screening and filtering for the purpose of melding for sustainable living. It is intended to encourage agency to "take action knowingly and intentionally" (Sewell & St. George, 2008, p. 205-6).

Indigenous Fijians have long had the options of preserving tradition, a choice that has been encouraged by the Ministry of iTaukei Affairs since colonial days. In all facets of life, however, Western ideas and values have either been adopted or hybridized with traditional culture, a practice that has been part of Indigenous history since first contact with outsiders – even before the arrival of the first Europeans (Hau'ofa, 1993). The *masi* framework can help learners ascertain whether certain values, concepts, ideas and practices are Indigenous and relevant to the sustainability of learner's everyday lifestyle. Such knowledge gives the learner ownership and empowerment to retain what is important or adapt to adjust to modern demands.

Masi is a traditional tapestry that is "constantly reworked" in response to social changes (Colchester, 2001). For both teachers and learners, the framework condenses and simplifies the understanding of epistemology and pedagogy. The visual representation of concepts can help individuals become potential social agents. In an oral and non-reading culture, like the iTaukei, motifs of the *masi* design offer an educational tool to help learners understand the complexity of cultural changes. It is also an art work deeply embedded in reflection.

As an iTaukei, and a member of the *tokatoka* (clan) Yautibi/Valebuliti in Natewa village, the tapa designs owned by my *tokatoka* have personal meaning for me. This set of motifs is part of my traditional identity and I have been concerned about the danger of it being lost under the impact of the vagaries of modern life. The best way to ensure preservation is to be creative in its applications. I approached the elderly women of my *tokatoka* – who have the authority to decide how, where and when the designs are used – and explained my request. I took this step to ensure the design and motifs are not lost or abused. Making it available in the public domain should authenticate its *tokatoka* identity and its ownership. As Agrawal (1995) has argued, "no knowledge can maintain its vitality and vigour" unless (in situ) the owners of knowledge have authorised others to decide how to preserve and use the knowledge and who should use it (p. 429-32).

Before discussing the epistemological and pedagogical aspects of the *masi* framework, the paper will place *masi* under the "lens" of an anthropological theory of art which considers "the production and articulation of an art object as a function of its relational context" (Gell, 1998, p. 11).

COLONIAL CONTEXT

The iTaukei view of tradition since colonial days has been to assert the virtue, even the supremacy, of their culture and the importance of its preservation (France, 1968; Macnaught, 1974; West, 1967). This mantra has long been a subject emphasised by the Ministry of iTaukei Affairs (formerly Fijian Affairs) in many of its official visits and utterances in rural villages and in the media (Moceituba, 2015; Rabaleilekutu, 2015; Sauvakacolo, 2015; Silaitoga, 2015). However, much of the content that was and is taught in schools is oriented to the British Empire with little relevance to the local context (Ravuvu, 1988). While outside the classroom culture preservation is encouraged, inside the classroom the superiority of European knowledge and values is emphasised. IK is

always historically viewed by the colonialists as inferior and backward; this view has "rubbed off" on iTaukei themselves, wittingly or unwittingly. To redress this mindset should be a major educational challenge.

Since 2009, the government has introduced measures to counter the erosion of iTaukei culture, such as the mandatory teaching of Indigenous language in schools. The teaching of Hindi is also mandatory, with the aim of countering the iTaukei nationalistic rhetoric of cultural supremacy that had been strongly asserted since the first military coup in 1987. The iTaukei dominated government today aims to treat the major ethnic groups equally, while reigning in the persistent supremacist views of many iTaukei.

The hegemonic position of the iTaukei in terms of demography, land ownership and political power since independence, contrasts starkly with the situations of Indigenous peoples of the First World. The Indigenous Fijians do not share the history of violence, dislocation and dispossession that the Indigenous people of the First World experienced, the impact of which they are still facing today. Indigenous peoples of the First World have been deprived of most of their land, and lost much of their culture and language through often oppressive contacts with the white settlers. They became deprived minorities in their own land. By contrast the iTaukei of Fiji rarely had any cause to feel aggrieved about their privileged position and are now nearly 60 percent of the population.

However, many iTaukei believe that their privileged position is now in question. Under the 2013 constitution and the various decrees imposed by the coup-based regime during 2006-2014 to quell resistance—mainly from Indigenous Fijians—the political situation is at present calm and stable. Ironically, however, the current predominantly iTaukei government is viewed by many iTaukei as being biased towards non-Indigenous people. Mandatory teaching of vernacular language has not dampened the iTaukei perception of such bias. Yet, aside from rhetoric about the importance of "preservation", Indigenous Fijians themselves have not made much effort to preserve IK.

Fiji in transition

The impact of globalisation in the Pacific Islands has often been rapid and powerful, creating a dilemma for Indigenous youths to deal with conflicting values of tradition and modernity. The study by Macpherson and La'avasa (2009) discussed the changing consumer behaviour and attitudes of the Samoans and argued that social transformations have been strongly influenced by three ideologies: Christianity, capitalism and colonialism (p. 101; see also Besnier (2011) on Tonga). Similar studies in Fiji have highlighted profound changes (Lal & Vakatora, 1997; Nayacakalou, 1975; Overton, 1989; Ravuvu, 1988). The transformation in Fiji, as in Samoa, has altered traditional chiefly authority in fundamental ways, although aspects of traditional hierarchy in both countries remain strong.[2]

An important factor inadequately recognised by writers on social change in Fiji is the influence of Christianity, mainly on the Indigenous Fijians, who are 90 percent of Fiji's Christians (Fiji Islands Bureau of Statistics, 2007). Urbanisation and the growth of new

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[2] The current government has abolished the Great Council of Chiefs which had acquired considerable political influence. The government hopes to contain whatever (weakened) power the traditional chieftainship has at the local level.

religious groups, mainly Pentecostal charismatic churches, have contributed to rapid changes in the rural villages (Ernst, 2006; 1994; Newland, 2006; Ryle, 2001; Varani-Norton, 2005). The teachings and practices of the new churches, according to Ernst (1994), are accelerating the deterioration of traditional lifestyles and social cohesion which have long been supported by extended kinship obligations and wider reciprocal relationships (p. 274-5). The old web of social relations is often weakened by religious differences as many of the new churches detach themselves from village functions and commitments. A recent editorial comment in the iTaukei vernacular newspaper, *Nai Lalakai*, attested to the changes and new divisions in the lives of the villagers resulting from the different ethics of various churches (Ravula, 2015).

Ernst (2006) claims that, while some churches see their role as a prophetic voice in society, others, especially newer churches, promote "a form of social ethics that challenges the individual by emphasising industrious living and divine blessing in the form of economic advancement: the Gospel of Prosperity" (p. 733). This new ethic is evident in the improved dwellings in remote villages where new roads have been built to encourage development. According to Peterson and Taylor (2003), house ownership is a good indicator of the modernisation of the domestic moral economy of the Aboriginal Australians, often with a weakening effect on the sharing that has been intrinsic to their social life and to the working of their kinship system (p. 108). This seems also to be now the case in Fiji.

MASI AS AN INDIGENOUS KNOWLEDGE SYSTEM

Concepts, such as the holistic world view; the respectful interconnectedness of animate and inanimate objects; life viewed in perpetual movement from past to present and future; and life and death as aspects of the same thing, are all basic premises of IK that are central to the discussion in this paper. However, the main emphasis will be on Indigenous Technological Knowledge (ITK), which is knowledge reconciliation, rather than IK in general.

Mwdime's (1999) definition of knowledge includes characteristics such as tools and techniques for assessment, acquisition, transformation and utilization of resources. What most distinguishes IK from Western knowledge is its deep rootedness in its local environment and history, and the holistic nature of its epistemology. Misra (2007) highlights this contrast, arguing that the epistemologies of Western scientific knowledge and IK are very different in terms of foundations, methodologies and operational contexts. Sillitoe (2002) describes the differences as IK lacking in grand repositories and having no coherent theoretical model, though the knowledge is shared locally.

The contrasts between the universality of Western values and culturally local IK create contradictions that need managing, perhaps by partly integrating or synthesising the two. While Thaman (2013, p. 111) raised the importance of an appropriate solution at the interface through research on Indigenous and global knowledge, Nabobo (2013) argues for aspects of Indigenous culture that should be incorporated to inform the work of educators. Neither author has considered possible ways of accommodating and integrating knowledge at the interface. Some melding is crucial at the interface to prepare students who must learn to live in both their traditional culture and to equip themselves with skills needed for successful lives in the modern economy.

The interface between profoundly different knowledges in a complex and fluid society like contemporary Fiji is highly vexing in the experience of many iTaukei. Human rights values, for example, create angst or empowerment amongst the young and the old. Although they clash with traditional communal values, the ideals of individualism are welcomed by many youths. A detached anthropological perspective can, perhaps, help resolve such confusion (Brouwer, 2007; Sillitoe, 2002). However, in a situation where fusion has already occurred, an ethnosystem approach based on scientific criteria can help scholars explain the concepts and behaviour of indigenous communities, especially those that result from the historical processes of synthesis (Slikkerveer, 1999, cited in Posey, 2002, p. 28). Combining concepts from the universal and culturally specific knowledges both validates IK and is essential to knowledge building (Hertzfeld, 1989, p. 18). Melding, for example, has always occurred in iTaukei society in pre-contact days when other Pacific Islanders settled and intermarried with locals, yet the concept of multiculturalism is now viewed as a "foreign flower" when Indigenous Fijians feel threatened by the presence of non-Indigenous people.

THE ESSENCE OF *MASI* IN OCEANIC CULTURE

Thomas (1995) observes that while *masi* has cultural affinities across the South Pacific region in its preparation and as an everyday expressive activity, its significance throughout Oceania was not so much in its general aesthetic quality, but in the "meanings of motifs that arise from the contexts of circulation and use*"* (p. 132). Gell (1998) agrees, arguing that studying art for aesthetic reasons is an "interior mental act only*"* and ignores that art objects are produced, circulated and sustained by a social process such as exchange, politics, religion and kinship. Gell questions the judging of non-Western 'art' according to a Western institutional definition which evaluates art objects simply aesthetically, without taking into account their production and circulation in a particular social milieu. He highlights how art objects have meanings which can be part of language as graphic signs, and emphasises aspects of Indigenous art such as *agency, intention, causation, result* and *transformation*. These are all features of *masi*. Gell (1998) sees art as active, sometimes "with the intention to change the world.*"* Indigenous art is, therefore, best understood from an anthropological perspective because of the "practical mediatory role art objects play in the social process."

Masi design has undergone many changes since the arrival of Europeans, and museum pieces not only reflect localised tradition but also ideas borrowed from garments worn by Europeans and especially patterns promoted by missionaries (Thomas, 1995). In Tonga, for example, motifs incorporated bicycles, ships, and clocks. Common motifs, such as crowns and lions, still remain as emblems of both Tongan and the British royal families. As Colchester (2001) explains: "barkcloths do not belong to a fixed historical index or a specific era, but are continuously reworked in the present, which marks organic processes of reproduction, death and growth" (p. 194).

THE *YAUBULITI* FRAMEWORK

The manufacture of *masi* is especially important in the village of Natewa, the chiefly village of the Vanua of Sovatabua. Knowledge production by *masi* making is controlled by women, called *marama ni draudrau,* who manage the intellectual property of the design and patterning (Colchester, 2001). The artistic work of designing, patterning and

stencilling of motifs is kept secret and, once stencils (cut from banana leaves) have been used, they are quickly destroyed to prevent anyone copying the patterns.

The *masi* framework (Figure 1) I will now discuss is derived from *masi* patterning and motifs of the *tokatoka* (sub-clans) of Yautibi and Valebuliti in Natewa village. The overall design is called *bolabola* and a motif is called *draudrau*. The framework is called *Yaubuliti*[3] because the design, including a set of (four) motifs, are properties of the sub-clans, passed down through generations.

Figure 1: The *Yaubuliti* framework *masi*

I consulted two women experts, assisted by two young women helpers.[4] My request for a piece of circular *masi* for an educational purpose was received with ambivalence as they had never made such a *masi,* the traditional shape being always rectangular. Changing the shape and retaining the cross at the centre without infills were the only two changes I requested. Every other pattern and motif on the *masi* is traditional. The change to a circle is intended to reflect the holistic worldview of the iTaukei people (Tuwere, 2002; Ravuvu, 1988). Obtaining the women's authorisation and then informing the sub-clans signified the sub-clan's approval.[5]

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[3] I have combined, with the women's permission, the names *yau* and *buliti* to form the name of the framework. The idea of using *masi* as a framework in teaching and learning was conceived during my stint teaching Indigenous Education at the University of Sydney.

[4] These two young women were the only people who were taught the secret Yaubuliti pattern.

[5] Their consent is recorded in the minutes of a meeting which this author attended.

Major divisions of the *Yaubuliti* framework

The framework has two major divisions, distinguished by two bands of ochre colour called *qele* (Figure 2) or 'soil' (band 6 separates the two divisions; band 2 highlights the significance of the outer edge concentric circle and its role to the rest of the framework) with motifs: *drau ni vutu* (leaf of vutu tree) (Figure 3) and *se ni vutu* (flower of vutu tree) (Figure 4).[6] The first division represents non-Indigenous knowledge, mainly Western knowledge and the second division stands for Indigenous people and knowledge.

Figure 2 : *qele*


Figure 3: *drau ni vutu*
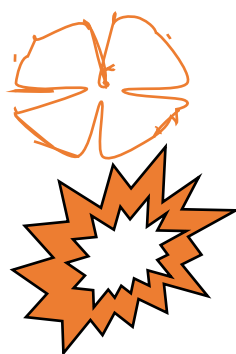
Figure 4 : <u>*se ni vutu*</u>

The first major division of the framework (see Figure 5) is called *uluna* or head. It starts from concentric circle 1 with *kalokalo,* star motif, and extends to the fifth concentric circle. The second division, called *lewena* (literally translated 'flesh') begins from the second *qele* on band 6 and extends to the core of the framework, the square with a cross and eyelet.

The centre of the framework includes the two motifs, *drau ni niu* (coconut leaves) and *covu*, (the square with a cross and an eye as the core). The core represents the learner. The word *covu* refers to an octopus's hiding hole. One of the women explained: as one looks into the *covu,* the "eye" of the octopus is the first thing one should notice", represented by the white spot at the very centre of the framework. The entire framework is built around this core, the learner within their cultural environment of conflicting knowledge systems.

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[6] *Vutu* is the *Barringtonia asiatic* tree which grows mainly along the coastline.
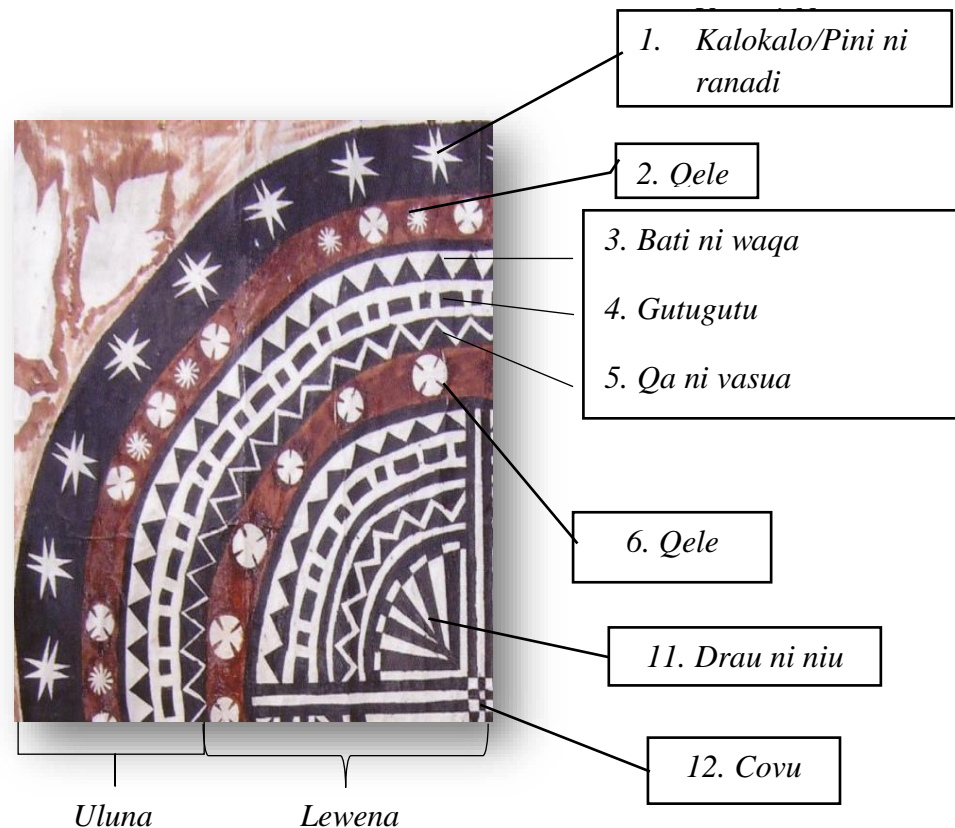
Figure 5: Framework section

What distinguishes the *uluna* from *lewena* is the first band with infills of *kalokalo* (star), sometimes referred to as *pini ni ranadi* (pin of the great lady) (Colchester, 2001). The other distinct motif in the head division is the *se ni vutu,* flower of the *vutu* tree (see second band).

Draudrau ni Yaubuliti (*Yaubuliti* motifs)

The two major divisions, *uluna* and *lewena* share a common set of three different motifs (see framework section), called *bati ni waqa,* prow of the boat, *gutugutu,* baggage, and *qa ni vasua,* clam shell. The set of *bati ni waqa, gutugutu* and *qa ni vasua*, bounded by the *drau ni niu* (coconut leaves in the tenth concentric circle)*,* are Yaubuliti sub-clans motifs.

The *Lewena* – Indigenous Vanua

The set of three motifs in the *Uluna* (Head) division are duplicated in the *lewena* division (bands 7 to 10). This signifies the learner must go through the same process of scrutinising the "baggage" of new knowledge in order to filter. This process is necessary in the Indigenous *vanua* because the wider society is multiethnic and multicultural. Conflicts and tensions at knowledge interfaces within it are unavoidable. As new ideas are "imported" into the indigenous *vanua*, they are scrutinised and "filtered", altered if need be or rejected. Knowledges within are also examined, critiqued, analysed and filtered to produce a product that works for them. The "infills closest to the visible edge of [a] cloth were especially important*"* (Colchester, 2001, p. 91). The two divisions inform each other because one cannot exist without the other. As both the *uluna* and *lewena* affect each other, both are especially amenable to change, allowing adaptation or retention, or creation of new knowledge for the strength and sustainability of the learner's life skills.

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The *Yaubuliti* framework core

The core consists of the *drau ni niu*, coconut leaves and *covu*, the learner or student. The *drau ni niu* is the "closure", of the preceding process. Included with the coconut leaves is the image *gutugutu,* explained below. The coconut leaves motif represents the end product of the process of examining, reviewing, selecting, assimilating, elements of non-Indigenous and IK. There is a saying in iTaukei language, *Vinaka vakaniu*, as good as a coconut (tree). The coconut cannot be underestimated in the lives of the Pacific people. It is considered in the Pacific islands as the "tree of life". The coconut tree is the source of nutrition, cash income, materials for construction, weaving and fuel. On this *masi* framework it represents the truth and strength of the process just described.

THE EPISTEMOLOGY OF THE *YAUBULITI* FRAMEWORK

The first two concentric circles of the *uluna*, the star (*kalokalo*) and the *qele,* with the leaf and flower, represent non-Indigenous knowledges, mainly Western knowledge. The *qele,* as already explained, means soil or land, marked by the coastline tree *barringtonia asiatica* or *vutu. Qele* is physical material that one can hold but it can also be referred to as *vanua,* an important and complex concept for this paper. But as a concept, v*anua* has social, cultural, ritual and spiritual significance to the Indigenous Fijians as, explained by iTaukei anthropologist Ravuvu (1988):

> The term *vanua* has physical, social and cultural dimensions, all interrelated. It means not only the land areas with which people are identified, but also the social and cultural systems—the people, their traditions, customs, beliefs and values together with other institutions established to achieve harmony, solidarity and prosperity (1988,p. 6).

Two *qele* circles represent different *vanua*(s).They are similar only in the presence of the *vutu* leaf. The *kalokalo* or *pini ni ranadi* in the first band, according to my informants, represents the brooch of the Queen of England. It can also represent the Queen's crown jewels (Colchester, 2001, p. 106). The presence of the band of stars (or the Queen's brooch), and especially the presence of the *vutu* flower on the second (*qele)* circle indicate the allure of the non-Indigenous knowledge; indiscriminately adopting Western ideas and materialism at the expense of traditional values only encourages the discarding of what is socially valuable in tradition.

Traditionally, the motif in the first band has always been the turtle, symbolic of the chiefs, who also embody spiritual gods (Hocart, 1952). Through the colonising and missionizing process, the symbol was changed from turtle to star. It can be inferred that the star also stands for the "Star of David", the symbol of the introduced religion, Christianity. It can also be deduced that the new religion and its culture, represented by the Queen's *pini* and chiefly status, are folded into one, one subsuming the other. The prominence of one of them will depend on the context.

Non-Indigenous knowledge, represented by the first two concentric circles, is "transported" or transmitted by the motif *bati ni waqa*, prow of the boat, to the second *qele*, which represents the indigenous *vanua*. The new knowledge goes through a process of learners' scrutiny that recognises that its "baggage", *gutugutu,* necessitates "filtering," just as the *vasua* (clam shell) filters to select what food is best and reject what is harmful.

Processes of transmitting, scrutinising, filtering, and selecting to produce a valuable knowledge end product should be recognised by educationists as important for meeting the learner's needs. For example, to apply the process above to the ideology of human rights, important questions that guide research or activities based on what, why and how, should inform learners to take actions individually or as a group to reconcile, whether its knowledge building, behavioural or psychological changes.

The meaning of the *vanua*

Knowledge building can start from the three aspects of *vanua:* social, cultural and physical. In the iTaukei language, the people of the land are referred to as *lewe ni vanua,* literally "flesh of the land." Their identity is deeply intertwined with the *vanua,* and exploitation or protection of the land must only be for the benefit of the *vanua*, its people and customs (Ravuvu, 1988, p. 7). As the *vanua* is communally owned, the benefits are for the Indigenous community. Knowledge building on the basis of the *vanua* concept today must first challenge its traditional definition, to help the learners "create space" to build authentic knowledge that accommodates non-Indigenous and Indigenous members of the wider community. What is crucial is the ability of the learners to *connect discourses within and between communities to open new possibilities for barrier-crossing and mutual support* (Scardamalia & Bereiter, 2003). \

The cultural aspect of the *vanua* includes the belief and value system, the "share and care" ideals that might be harnessed to maintain harmony and solidarity in a culturally diverse community (*Fiji Times Online,* September, 29, 2016).[7] These aspects shape how people think and behave. To create new knowledge, iTaukei people need to think "outside the box" of the traditional *vanua* to be more inclusive and to make a concerted effort to increase the cultural capital of the wider society.[8]

The third, physical, dimension of the *vanua*, the land itself, is linked to the meaning of *lewe ni vanua* as conduits for how land is exploited or protected for the benefit of its people and customs and for the preservation of the environment. To the iTaukei, land is "something of divine ordination, something that was created to control him through life" (Scarr, 1980, p. 76, quoting Ratu Sukuna) and to sustain environment and life.

The bedrock of the iTaukei epistemology

The concept *lewena* as a division in the framework and its strong link to *lewe ni vanua* (flesh of the land), is a possible conceptual reconciliation of different knowledges. As a multicultural and multiethnic society, Fiji poses the question of how the Indigenous Fijians might be able to perceive their non-indigenous neighbours as *lewe ni vanua,* by questioning and modifying the meaning of the concept *vanua.* Because the concepts *lewe ni vanua* and *vanua* are deeply intertwined, their definitions need to be problematized to

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[7] Feature Article, Karan, Sashi, "Peace which is true" is an Indo-Fijian experience of what it means to belong to a *vanua*.

[8] Cultural capital are assets, both tangible and intangible, that give people social mobility and power. They are the value that the society places on non-financial assets that could be shared between Indigenous and non-Indigenous peoples such as the national name "Fijian" or the right to wear iTaukei women's customary attire (*chamba*) or *sulu* for men.

challenge learners to examine the concept and whether it needs to be redefined and the ramifications it may create. Tuwere's (2001) understanding is a good starting point:

> One does not own the land; the land owns him. Man and land are one. He derives his name and therefore his constitution as a human being from the *vanua,* which means both turf and people. (2001, p. 49).

This definition of the traditional concept *vanua* probably articulates the views of many iTaukei. But there are equally many who see the value of land in modern terms as open to individual ownership and have distanced themselves to a certain degree from the literal and symbolic traditional meanings of *vanua*. In challenging the traditional meaning, learners need to be open to other interpretations or views. The central focus is the accommodation of non-Indigenous people in the merging of the new-and-old conceptual understanding, to advance the frontiers of knowledge as learners see fit (Scardamalia & Beraiter, 2003).

The *Yaubuliti* framework aims to discern and interrogate the foundations of different knowledges with the intention of either retaining traditions that sustain the iTaukei identity, or reconciling or transforming knowledge concepts. The approach should involve "complicated conversations" that answer questions such as the what, why and how of education for a desired future society. This requires planning to ensure that the interface is inclusive of the diverse nature of the society.

THE PEDAGOGY OF THE *YAUBULITI* FRAMEWORK

The *draudrau* or motifs are infills of the framework that help to explain the social meaning of *masi* in the iTaukei culture. *Draudrau*, in the iTaukei language, is equivalent to *vakadewa*, which has three different translations, depending on context of use (Capell, 1941, quoted in Colchester, 2001, p. 58). *Vakadewā* means *the spread of information like a disease* by the agency of art or by a person. *Vakadewa* can also mean to translate, but also to filter. These three active "transmissions of information" are deeply intertwined in the pedagogy of the *Yaubuliti* framework. Active transmission of information involves both teachers and learners as they collaborate, exchange and accommodate their differences at the interface.

Within the two divisions of the *masi* are two features that have important functions in the *masi* tapestry and in pedagogy: *viroci* and *peo'o*.

Viroci

Viroci refers to the duplication of the three motifs*, bati ni waqa, gutugutu* and *qa ni vasua*, as infills in both the *uluna* and *lewena*. In the Natewan dialect, *viroci* means to retrace or revisit. In pedagogical terms, the concept can mean to review, re-examine, re-analyse, re-assess, re-evaluate or just simply reduplicate. The motifs represent the need for the learners to evaluate whether whatever they created is to their satisfaction. Thus in the making of *masi*, *viroci* is a phase where women pause to critique their handiwork, consult each other, assess and amend, learn from flaws and make a consensual decision on the next step. Throughout the making of the *masi*, there is collaboration and mutual correcting and reminding among the participants. Much reflection is involved. In her analysis concerning elaborated *masi* with re-duplicated bands of motifs, Colchester named the imagery of production as the "axis of reflection." Reflection at this stage is called

"epistemological reflexivity, which encourages [learners] to reflect upon [their] assumptions about the world at the knowledge interface, or in the course of researching" (Willig, 2001, quoted in King & Horrocks, 2010, p. 127). Self-reflection is essential in both teachers' and learners' everyday practice.

Peo'o

Peo'o, are thin black or white circular lines that separate the concentric circles as far as the *drau ni niu* motif (see bands of black and white around the coconut leaf, Figure 1). They distinguish each band of motifs as far as the eleventh circle, but also "glue" them together to create a holistic picture. *Peo'o*, like the process of *viroci,* is embedded in reflexivity by the teacher and the learner. There is reflexivity in regard to the knowledge content, concepts and contexts. Each step of the teaching and learning process is reviewed as is the method of reviewing itself, to ensure there is flow and harmony of the different parts. One of the women explained to me:

> *Raica me rau lako vata tiko na draudrau kei na uluna* [Ensure that what you have just printed (*draudrau*) synchronises with the *uluna* (the first band)].

The first concentric circle (with star infill) constitutes the encompassing field against which other components of the design are set (Colchester, 2001, p. 106). Colchester refers to the *peo'o* lines separating sequences of motifs as "intervals of light and efflorescence" (p. 112). Each step of the process involves critical reflection as learners collaborate to come up with the best outcome. The end product is represented by the *drau ni niu* or coconut leaves. Collaboration between learners and teachers should ensure that the end-product of their exchange should be culturally sensitive and context-relevant (Chilisa, 2012).

The student/learner: *Covu*

Four thin white lines hemmed in with black emerge from the *covu.* These strips stand for self reflection or personal reflexivity which "involves giving consideration to the ways in which our [personal] beliefs, interests and experiences might have impacted (or not) upon learning activity" (Willig, 2001, quoted in King & Horrocks, 2010, p. 128). The last band of *gutugutu* (baggage), circle nine, represents the learner's critical self-observation on her contribution and also her evaluation of her belief and interest in the issue discussed. The learner's reflexivity as a constructor of knowledge is not only an inward "examination" but also an outward approach of social interaction and co-construction with others (King & Horrocks, 2010).

CONCLUSION

The mantra of government since colonial times emphasising cultural preservation has discouraged critical self-conscious awareness amongst the iTaukei. There has long been a large gap between what is asserted to be ideal and people's lived reality. The social meaning of *masi* motifs and design can be useful as an educational tool for conceptual understanding and knowledge building in relation to identity and diversity. This paper has proposed an epistemological and pedagogical approach using a holistic *masi* framework to help learners reconcile "the best-of-the-old with the best-of-the-new" supporting (McKay, 2013, p. 6). The framework, with its divisions representing the flow

of information from a non-Indigenous to an Indigenous *vanua*, depicts a process of scrutinising the "baggage" of new knowledge to filter out 'ill-fitted' aspects that are discordant with the old, or to reconcile the old and the new. The process involves epistemological reflexivity to ensure the outcome is sustainable. This process also requires the learner to self-examine by questioning her motives, beliefs, experiences, and interest.

An interrogation of any knowledge context, content, and concepts, is critical to answer the what, why, and how, to ensure that the curriculum is the outcome of a process that shows concerns for the future of the society. This requires planning and formulating objectives that accommodate the diverse nature of learners as teachers, and learners to work collaboratively to achieve the best outcomes. Central to this is the need for teachers and learners to acquire the exercise of reflexivity as a lifelong skill.

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