FEATURED ARTICLES

HIGHER EDUCATION SIG
COMPARATIVE & INTERNATIONAL EDUCATION SOCIETY

Journal of Comparative & International Higher Education

Philosophy for *Comparative and Int'l Higher Education*

This is the official journal of the Comparative and International Education Society's (CIES) Higher Education Special Interest Group (HESIG), which was created in 2008. HESIG serves as a networking hub for promoting scholarship opportunities, critical dialogue, and linking professionals and academics to the international aspects of higher education. Accordingly, HESIG will serve as a professional forum supporting development, analysis, and dissemination of theory-, policy-, and practice-related issues that influence higher education.

Submission and Review

The Editorial Board invites contributions dealing with the complementary fields of comparative, international, and development education and that relate to one of the areas listed in the Philosophy section above. Contributors may:

1) Submit a research article of 1,500 - 3,000 words. All articles will undergo a blind-review peer-editing process.
2) Submit a comparative report analysis of 750 - 1,000 words that examines the primary themes and focus of more than one book, current report, or other documentation that guides higher education institutional policies.
3) Submit graduate student research in-progress of 500 - 1,000 words that shares new research that will help to set the tone for current and emerging issues in the field.

Electronic submissions are accepted on an on-going basis and should be sent to jcihe.hesig@gmail.com. Manuscripts are evaluated by the editorial board—with full confidentiality on both sides—and then accepted, returned for further revisions, or rejected.

The style and format of the *Journal of Comparative & International Higher Education* follows the Chicago Manual of Style. Only endnotes are allowed. USA spelling (e.g., center, color, organize) and punctuation are preferred (single quotations within double if needed), and requires a short paragraph of bibliographical details for all contributors.

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Introduction to Fall 2017 JCIHE

Dear Readers –

    I am pleased to share the Fall 2017 issue of the *Journal of Comparative and International Higher Education (JCIHE)*. JCIHE is the journal of the Higher Education SIG of the Comparative and International Education Society (CIES). JCIHE contributes to identifying and expanding upon important discussions taking place or emerging within the field of comparative and international education. JCIHE encourages submissions that reflect quality research from a range of contexts, perspectives, methodologies, and intersection of disciplines. In so doing, JCIHE advances the widest possible vision of educational research that is being conducted at various stages of development. While we embrace greater diversity in submissions, we retain the highest standards

    The Fall 2017 issue offers four new articles that explore a range of issues related to comparative and international higher education. There are two primary themes found in these articles. First is the theme of changing higher educational missions. Peter Mayo examines this in terms of exploring a tension in European Higher Education between the need to educate for employability and neoliberal tenets, and alternative discourses, such as life-long learning. In the latter is an emphasis on viewing higher education (HE) as a public good that should be easily accessible and that should be offered even if it does not have a direct benefit to employment. A. Kayum Ahmed explores how the #RhodesMustFall student protests are asking for a change in higher educational missions in South Africa. Change in this respect encompasses a need to decolonize education, end institutional racism, increase access to education, reform the university curriculum to honor black consciousness and intersectionality, and lower the cost of higher education.

    The second theme focuses on examples of a changing higher education curriculum. Aki Yamada analyzes how globalization influenced changes in Science, Technology, Engineering, and Math academic fields (STEM) in Japanese Higher Education. Emphasis is placed on how Japanese government policy is a reaction to globalization and how a redefined curriculum has been implemented to make students globally competitive. Some examples include mandating that students learn English and learn Westernized soft-skills even if these changes challenge traditional Confucian methodologies. Rami Hawi explores longitudinal curricular change in medical education in Lebanon that began with the adopting of a United States team-based learning (TBL) curriculum to facilitate problem-solving and to build communication skills, professionalism, teamwork, and leadership skills. The case study explores how well the curriculum adaptation worked in Lebanese medical programs and if this adoption resulted in the intended positive effects on student professionalism, communication skills and personal development.

    The editorial staff of JCIHE is pleased to help support the CIES Higher Education SIG in advancing JCIHE as a professional forum that supports development, analysis, and dissemination of theory-policy, and practice-related issues that influence higher education. I thank all of those who contributed to this edition, including the peer editors. I hope that you will consider contributing to future issues of the *Journal of Comparative and International Higher Education (JCIHE)*.

Editor in Chief,
Rosalind Latiner Raby

Alternative Higher Education (HE): Discourses in Lifelong Learning (LLL)

Peter Mayo[a],*

[a]University of Malta, Malta

*Corresponding author: Email: peter.mayo@um.edu.mt Address: University of Malta, Msida, Malta

Introduction

In an article published in a UK sociology of education journal, I analysed the EU discourse on Higher Education (henceforth HE) (Mayo 2009) mainly through its policy documents on universities and other tertiary-level institutions. I argued that in this discourse:

> A number of key words emerge from these and other related documents, as well as other documents by agencies that dwell on the implications of these policy directions, such as the Council for Industry and Higher Education (Brown 2007) and the League of European Research Universities (LERU 2006). The key words include 'knowledge economy', 'competitiveness', 'entrepreneurship', 'lifelong learning', 'access', 'mobility', 'outcomes and performance', 'quality assurance', 'innovation and creativity', 'diversification', 'privatisation','internationalisation','autonomy' and 'business-HE relationships'. Once again, the list is not exhaustive but contains the key terminology on which the EU's HE discourse rests (Mayo 2009, p. 89).

I also argued that the overall tenor of this discourse is that of HE for employability and also spoke about the agenda of industry gaining the upper hand with the emergence of documents geared towards a more structured relationship between universities (important institutions within HE) and business. The paper highlighted the underlying neoliberal tenets of this discourse even though I tried to "tease out the tension that exists in the discourse between neo-liberal tenets and the idea of a Social Europe" (Mayo 2009, p. 87). The latter is a term used by those who point to an alternative way of doing European politics, one which extends beyond Neoliberal market-oriented approaches to include social solidarity measures and safety nets; they often point in this regard to Europe's tradition of social welfare programs and more recently the Social Charter.

This Article

In this brief article, I would like to focus on one aspect where this tension is played out, namely the area of University/HE Lifelong Learning (henceforth LLL). By Higher Education, I mean all those institutions and organized forms of learning that occur at tertiary level, that is to say those institutions whose provision extends beyond secondary education and high school. These include universities, academies and vocational colleges that award degrees, diplomas and provide certification of professional attainment. I however focus on those institutions which have potential for furnishing people with further and LLL opportunities outside the mainstream 'lock-step' approach. Many of the HE experiments that serve as a radical alternative to the mainstream provide LLL opportunities in that they can attract students who otherwise cannot benefit from full time attendance at an institution of higher learning.

I will start by pointing to the most prominent forms of HE taking place today, focusing on their connections to the market and underscoring the neoliberal tenets that, for the most part, underlie HE practice worldwide. The second part will deal with alternative approaches to HE, including university education, indicating, borrowing from Carl Boggs, the 'prefigurative' nature of much of this work (i.e. embodying those practices that constitute the ultimate, long-term vision of a future university or HE institution).

Many of these attempts point to alternative discourses to the generally accepted hegemonic one of a market oriented and Neoliberal LLL approach in HE. This alternative discourse affirms HE as a public good and the need for learning at this level to be accessible to most people irrespective of whether or not they have the wherewithal to benefit from it. It is primarily not learning *for* the economy and the market but learning to *engage critically with* society in general (this of course includes the economy). Much of this alternative

discourse is still in its embryonic form. The institutions that embrace it face major challenges in terms of acceptance and recognition. The article however argues that these pockets of alternative provision offer some indication of the direction struggles for a more democratic approach to HE can continue to take.

Theoretical grounding

Neoliberalism is the socio-economic model which is all pervasive in the current discourse and *modus operandi* of HE institutions worldwide. It is so well documented in the literature that its main features need not be rehearsed in detail here (see Callinicos 2006; Giroux 2014; Rhoads and Torres 2005). A key feature is that of HE serving as a consumption rather than a public good with students and academics seen primarily as 'clients' and 'service providers' respectively, rather than members of a community of scholarly learners/educators engaging in epistemological co-investigation of objects of inquiry. Paulo Freire's proposed latter function (1998, p. 35) is reflective of a whole critical discourse in the history of education where education is seen as potentially contributing to the further development of a democratic, critically inquiring public sphere and learners are seen as social actors and not simply producers/consumers. This discourse, conceiving of HE as a public good and as a repository of critical thinking accessible to all, provides the guiding thread for my analysis in this paper.

Implications of the EU HE Discourse for LLL

The EU's HE discourse has several implications for adult continuing and LLL. The EU's focus is on the 20/5-65 working age bracket, despite other references to LLL as spanning life 'from cradle to grave'. The emphasis on work and employability encourages provision of continuing education for the economy's purposes, and this despite the fact that a person's 'employability' does not necessarily translate into 'employment' (Gelpi 2002) or a person's 'desired level of employment' (Brown, Lauder, and Ashton 2010).

Colleges of Further Education providing education beyond that received at secondary school, that is distinguished from University-based HE, are likely to run courses purported to lead to a variety of 'prospective jobs', often supported by funding from employers (CEDEFOP 2015). Incentives for this purpose, including tax deductions for investment in employee training, are often provided by governments. Universities, for their part, are more likely to invest in continuing professional education/ development (CPE or CPD) programs, funded by prospective adult learners. They include those who can afford the fees involved, who take loans for this purpose or who benefit from 'sponsored mobility' by their own employers to obtain the qualifications that suit that higher rank in the firm earmarked for them. The added qualifications, say an MBA or DBA, also convey status to the firm that has them on its books.

As for broader domains of learning, this is often governed by the market and by the ability of people, seeking coveted qualifications in say ICT, Management, the Arts and Social Sciences, to pay for courses leading to them. The classic example here would be the University of London's External degree provision, the prices for which have shot up exponentially since the 80s. These qualifications are often also obtained through a process of 'sponsored mobility' for teachers working in different institutions, including colleges of further education. Of course, this consideration does not necessarily apply to all nations. Suffice to mention that the English Open University model has taken root in a variety of places, as has the London External degree model. The former differed from the latter as it traditionally provided a more structured course, with modules and assignments, while the latter was, for years, based solely on the candidate's performance in a final summative exam, with a possible allowance for one or two papers to be taken in advance. The London system changed considerably in more recent years – modular, college/school/institute-based, branded 'International Programmes' and designed to take advantage of recent technological developments. Of course, in the past, many students in the University of London External degree programs enrolled in correspondence programs, provided by independent colleges (e.g. Wolsey Hall, Oxford), that prepared people for these exams –some even attended the odd residential seminar offered by the University of London or by the preparatory independent college itself.

A non-UK institution, UNISA (University of South Africa) that offered external degree courses somewhat on the lines of the old London External Degree model, though more structured, charges what is believed to be reasonably affordable fees. It has a long standing provision of external degree course programs. Nelson Mandela is arguably its most celebrated graduate, having studied for a UNISA external degree when incarcerated on Robben Island (UNISA 2017). He also studied with Wolsey Hall to prepare for his London External LLB degree while also in confinement.

As far as open universities are concerned, a few stand out. We can refer to the 2006 launch of the Open

Universiteit in the Netherlands. We also find Athabasca University in Alberta, Canada, South Africa's UNISA (University of South Africa, established in 2004 as a result of the merger between the old UNISA –from which Mandela graduated - and Technikon Southern Africa with the incorporation of the Vista University Distance Education Campus, Vudec), the Open University of Israel, the Universitat Oberta de Catalunya with its headquarters in Barcelona, the Palestinian Al-Quds Open University (QOU) with its headquarters in Jerusalem/Al-Quds, the Hellenic Open University and more recently the Open University of Cyprus (English and Mayo 2012). This distance learning model, one of many models whereby universities and other HE institutions can provide forms of LLL, testifies to the widespread use of open learning platforms. This effort in reaching people in different localities has come a long way since the days of 'correspondence education'/'home study' (e.g. Wolsey Hall College which, though autonomous, prepared people to take London External degree and other academic bodies' exams) involving conventional snail-mail communication and printed course material with model answers to set questions.(see Fisher 1983, p. 2) The EU and the larger hegemonic discourse of ICT have arguably had their greatest impact on university continuing education in the area of online distance learning.

Access and the Public Sphere

The expenses vary among the different institutions, often to a large extent. The issue of access becomes relevant in this context. One way in which universities can engage in a meaningful process of *access* is by re-conceiving of their role as being there to not simply boost the economy, 'knowledge intensive' or otherwise, but contribute to a regeneration of democracy and the public sphere (Giroux and Giroux 2004). We have recently witnessed the development of MOOCS - Massive Open Online Courses - taking root not only in the USA but now also across Europe and especially the UK. For the moment, much of what passes as MOOCS constitutes a form of open access learning. Certain universities and consortia of universities from different parts of the world place their entire course material online, free of charge. People who sign up for a MOOCS study unit can carry out the various tasks required of course participants and receive feedback. For the moment and in the majority of cases, they are barred from receiving the official university credit that can result in a degree. Some universities provide the option of obtaining an official testimonial of the course undertaken (edx (a) 2017) - a certificate - against a nominal charge (edx (b)

2017). This form of provision appears prima facie to be a way for the university or institution concerned to contribute to the public sphere. It appears laudable from an 'access to knowledge' perspective, a form of 'socialization of the means of knowledge production' (Livingstone 2013, pp. 51-52), if you will. It remains to be seen what trajectory this type of provision will take in future – simply 'testing the waters' in the marketplace of knowledge dissemination and acquisition? The jury is still out on this.

Alternative Models of HE as a Public Good

As far as HE as a public good is concerned, much will depend on the nature of the institution concerned. There will always be those politically committed institutions or consortia of such institutions that seek to retain vestiges of university continuing education as a public good. In short, they would prioritize access for those not expected to form part of the traditional constituency for universities. Social class is an important factor in this thinking. Today one also broadens the profile to include people for whom traditional university settings can be disabling or people of an ethnic orientation and culture different from those of mainstream students.

One would expect the public good factor to feature prominently in the work of the Global Labour University (global-labour-university.org), with the International Labour Organisation (ILO) among its institutional consortium members. It involves universities working in tandem with trade unions. A consortium of this type would be expected to strive to retain the notion of a workers' education program in the tradition of those programs which once represented, in the UK and elsewhere, the best of adult education in its democratic extension mission. This is the tradition associated with the likes of R.H. Tawney, Raymond Williams (Mcllroy and Westwood 1993) and E.P. Thompson. This tradition is associated with Ruskin College, Plater College, the Plebs League (Waugh 2009) and the Oxford Delegacy for Extra-Mural Studies. One can also mention, in this context, what Sharp *et al* call the "Repressed historical tradition of independent working class education" (Sharp, Hartwig and O'Leary 1989; Simon 1992; Waugh 2009).

Engaging with Wider Communities

In this respect and in keeping with the EU's promotion of the concept of 'active citizenship', not one in which the individual is reduced to the intertwined roles of producer-consumer reminiscent of Marcuse's one dimensional citizen (Marcuse 1964),

we require institutions that support the efforts of those who have traditionally been swimming against the current. They have been doing so by seeking ways and means of extending their roles as educators outside the university. They seek to build alliances with activists and popular educators in the wider communities, among youth, children and adults, doing such work against all odds and in the face of much risk. Alas, the recurring complaint is that this type of community involvement is rarely rewarded in conventional department reviews, despite the fact that 'contribution to the community' is listed as one of the criteria for promotions in a number of universities.

HE, Universities and Social Movements

We often come across attempts by academics to engage the academy in popular education, to forge partnerships with grassroots activists, as evident in the Ontario-based projects, NALL (New Approaches to Lifelong Learning) and subsequently WALL (Work and Lifelong Learning) or PEN (the Popular Education Network), coordinated from Edinburgh. They involve engaging the academy in communities, including, in the Ontario case, engaging in communities of workplace learners in different sectors of the economy (wallnetwork 2017). These and other initiatives in various parts of the globe can provide signposts for future directions that a truly vibrant HE institution can take. See for example attempts at forging links with social movements and other social organizations. This is the sort of link augured by Boaventura de Sousa Santos when providing the proposals on which the Popular University of Social Movements was set up at the World Social Forum in 2003. The UPMS, a collective asset, holds workshops, preferably of a couple of days involving discussions, study and reflection periods and relaxation activities (Alice 2017). One classic example is the MST (Movimento Trabalhadores Rurais sem Terra [Landless Peasants Movement]) and especially the school it supports, the Florestan Fernandez School in Brazil, named after a working class sociologist (Mayo and Vittoria 2017, pp. 93-95). It is recognized, by the Brazilian government, as a school with levels of learning equivalent to those of a University. It remains to be seen, however, whether, as a result of the impeachment of President Dilma Youssef, in what has been perceived as an indirect 'coup', we shall witness the withdrawal of this recognition, given the Brazilian Right's opposition to the MST.

In these most innovative of institutions, one finds parallels with other grassroots experiments in HE emanating from such movements as the Occupy Movement in the USA (Piven 2012) and Europe or protestors in Turkey (Gezi Park), Greece and Italy who set up university tents and itinerant libraries. These provide a taste of what an alternative, popular higher education would look like. Other initiatives include the Global Centre for Advanced Studies (GCAS) (globlcenterforadvancedstudies.org) founded by Creston Davis (critical-theory.com 2017) and which includes established academics/cultural workers such as Alain Badiou, Oliver Stone, Gayatri Spivak and Antonio Negri. This institution carries out its seminars in a variety of countries, including France (Paris) and Cuba. It seeks to bridge the gap between theory and action by working with activists in connection with such movements and parties as *Podemos*, the latter founded in Spain in the aftermath of the 15-M/ ¡*Democracia-Real Ya!* demonstrations.

Eschewing Nostalgia for the Humboldtian Model

Most of this work can be regarded as providing an alternative to the Neoliberal University. When confronting the Neoliberal University people often nostalgically lapse into exalting some 'golden age', including that in which the Humboldtian idea of the Prussian/German University was raised. One would pose the question of whether, for all its virtues, the old, often-evoked Humboldtian concept of the university remains relevant. Aside from its elitism, this concept was purported to serve a society that has changed significantly since the time when the idea was conceived. This in a way recalls Gramsci's 'epitaph' to the old, Italian classical school which was once effective but could not continue to be so in his time since the society it was meant to serve had changed by then (Manacorda 1970). What form this newly required university institution takes depends on the political values and orientation to knowledge production and dissemination that underlie the concept being carried forward. The hegemonic market-oriented EU discourse in HE is being met with resistance. Some of this resistance can be found within the neoliberal institutions themselves. This lends credence to the gramscian view that hegemonic institutions contain, within their interstices, the spaces in which the relations involved can be challenged and renegotiated. As Foucault argues, the resistances are not external to the power structures in place.

One finds resistance in the experiments of bringing together world renowned intellectuals, academics and cultural workers in institutions making degrees available to persons who cannot afford high quality university education on a full-time basis. These institutions cover areas of knowledge not easily associated with 'instrumental learning', that is learning for the economy. Let us take, for instance, the

European Graduate School, a not-for-profit degree granting institution in the Social Sciences and Humanities charging moderate fees and which has just received EU-wide accreditation through Malta's National Council for Further and Higher Education. Students, many in full time employment, meet in one of its two campuses (Saas Fe, Switzerland and Valletta, Malta) for intensive two week periods working with such high caliber academics, artists and directors as Judith Butler, Slavoj Žižek, Jean-Luc Nancy, Margerethe Von Trotta and Giorgio Agamben. They do this in addition to writing research papers and working for a much longer period on their dissertations at MA and PhD levels. The Global Centre for Advanced Studies (GCAS) also seeks to depart from conventional university modes of operation. It has its degrees accredited by the Bologna Accords (Europe) through the Institutum Studiorum Humanitatis (ISH) and Alma Mater Europaea–ECM.

The Cooperative Institute for Transnational Studies (CITS) (coop-its.org 2017) is another institution pursuing a non-conventional approach to LLL in HE. It is a cooperative, where one member has one vote in the decision-making. It is creating higher education as the commons, neither public/state funded not private, but self-run. It was founded by Greek scholar and activist, Maria Nikolakaki, Professor at the University of Peloponnese, Greece, formerly of GCAS, and features such scholars and academics as Jacques Ranciere, Etienne Balibar, Tariq Ali, John Holloway, Raquel Guttierez and Peter McLaren.

CITS collaborates with institutions such as the Autonomous University of Puebla, Mexico, for accreditation, and the California Institute of Integral Studies, Mexico Solidarity Network, the Social Sciences Centre at Lincoln (UK) and the Universidad De Tierra en Oaxaca for its projects. This, especially the Oaxaca connection, indicates the urge for these types of alternative institutions to collaborate with social movement activists from all over the world. In fact, the issue of collaborations and the partner institutions involved constitutes a bone of contention within these alternative agencies for continuing education and LLL. This has, at least in one instance, led to a fall out, with a group leaving the institution to set up another on the grounds that the first institution strayed from its original goals.

With no fees charged and no formal distinction drawn between students and staff, the Social Sciences Centre in Lincoln, England provides a radical alternative to the widespread marketization of higher education. Lying at the heart of the city, it is housed in local county council premises, as indicated in an interview with one of its key animators, Mike Neary (opendemocracy 2017).

Many of the above initiatives are born out of dissatisfaction with the way universities have been developing in the USA and Europe over the years, especially their neoliberalisation. Needless to say, these resistances and re-conceptualizations meet with countless obstacles when it comes to recognition of qualifications and funding. We have grown accustomed to seeing a negative reaction 'from above' to anything highly innovative coming especially from the grassroots. These alternative projects are striking at the foundations of institutions that have, for the most part, been conveying privilege. Those who unlearn and give up privilege freely are few and far between. However, the establishment and general recognition of a radical social-justice oriented HE institution or university requires a 'long revolution', to borrow the term coined for wider usage by Raymond Williams (Williams 1961). It is the revolution to which the GCAS, CITS, UPMS, MST (Florestan Fernandez School) and Lincoln projects aspire and contribute. The same holds for those setting up Tent University in London and Tent State University (a movement in the USA and Britain) when occupying squares and streets, reclaiming them as public spaces (Earl 2016). These types of alternative HE agencies focus on collective learning and activism, captured in CITS' slogan 'Occupy Knowledge'.

This revolution engages those educators, working inside and outside the academy (tactically inside and strategically outside?), who act beyond the traditionally perceived boundaries of their work, culture and social location to join forces with others (on whose terms?) in the quest for a substantive democracy.

Teaching and research

To return to my 2009 paper, I argued that such a democracy would be ill served by an HE discourse seeking to separate teaching from research, thus denying possibilities for *praxis*. This separation was suggested in certain EU circles (the separation between research universities and teaching universities) (CEC 2006). This discourse leads to the occasional vice-chancellor, in a university with a strong community extension tradition, urging students, administrators and academics, to think 'outside their country' and reach out to the world (read: see themselves as part of an institution aiming to be a 'world university', the much coveted modern day 'world class' university).

This is the direction the current EU HE discourse seems to be taking, as the university seems to have found itself at a crossroads. It sought change from the

'old ideal', popularly denigrated as that of the 'ivory tower', and chose the market oriented one, albeit tempered by some social-democratic concerns. Several of the above initiatives, certainly the more progressive ones, many in their embryonic stage, are born out of dissatisfaction with this choice. They provide an alternative which exalts criticality in education. They privilege accessibility - one's being able to further one's education without having to abandon full-time waged work at the same time. One is allowed to do so at a very affordable nominal charge by institutions whose main concern is to foster the advancement of knowledge and not serve as money-making devices to strengthen the economy. These institutions' concept of knowledge is broad enough to embrace concerns with developing not simply the economy but a healthy democratically-inclusive environment. That these pockets of alternative approaches exist has just been documented. That they are not mainstream approaches indicates that they prefigure a university not as it is but as it can and, depending on one's values, should be – a plausible alternative to the neoliberal paradigm. At the moment, this constitutes marginalized and at times 'subaltern' HE work serving for the most part as sources of LLL for those who cannot access full time study. In their accessibility and alternative way of doing things, they constitute a subaltern form of LLL that prefigures what can prove to be the democratic university of the future.

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#RhodesMustFall: Decolonization, Praxis and Disruption

A. Kayum Ahmed[a],[*]

[a]*Teachers College, Columbia University, New York*

*Corresponding author: Email: aka2156@tc.columbia.edu Address: Teachers College, Columbia University, New York, United States

Introduction

On March 9, 2015, Chumani Maxwele, a student at the University of Cape Town in South Africa, took a bucket of feces and threw it against a bronze statue of Cecil John Rhodes located on the university's campus (Nyamnjoh 2016). Rhodes, who was recognized as a British imperialist and racist, became a symbolic focal point for #RhodesMustFall (RMF) - a radical student movement centered on the decolonization of education by confronting questions of institutional racism, access to education, and reforming the university curriculum (Gibson 2016; Luescher 2016; Mbembe 2016). Maxwele's defacement of the Rhodes statue fueled an ongoing national debate on decolonization and the cost of higher education that had started in the early 2000s (Booysen 2016). Protests at universities across South Africa erupted following the defacement of the Rhodes statue expanding RMF into the #FeesMustFall (FMF) movement which has demanded free, quality, decolonized education (Booysen 2016; Hefferman and Nieftagodien 2016, Luescher, Klemenčič and Jowi; Motala, Vally, and Maharajh 2016).

The RMF movement seeks to decolonize education by employing tactics of disruption inspired by decolonial, black consciousness and intersectional theories (Booysen 2016; Gibson 2016; Pithouse 2015). At the same time, the RMF paradoxically rejects human rights discourses in its Mission Statement (Kamanzi 2016, Maxwele 2016; RMF 2015) despite the well-established link between social movements and human rights (RMF 2015; Cohen and Rai 2004; Niezen 2003; Keck and Sikkink 1998). Instead, the RMF draws on Biko's (1978) ideas of black consciousness, Fanon's (1963) decolonization thesis, and Crenshaw's (1991) intersectionality theory, framing their struggle as a resistance to the dehumanization of black people which they argue "is a violence exacted only against black people by a system that privileges whiteness" (RMF 2015). The RMF's adoption of decolonial theories and its explicit rejection of rights discourses, forms the first dimension of this paper located within scholarship centered on social movements and human rights (Allen and Jobson 2016; Urla and Helepololei 2014; Goodale 2006; Ballard, Habib and Valodia 2006; Ballard, Habib, Valodia, and Zuern 2005; Niezen 2003; Escobar and Alvarez 1992).

A few weeks after the RMF movement started at the University of Cape Town, students at the University of Oxford in the United Kingdom also created a RMF movement using the Rhodes statue located at Oriel College as a symbolic reference point in their call for decolonizing education (Mpofu-Welsh 2016). Similarly, the RMF in Oxford invokes decolonial and intersectional approaches on its Facebook page (RMF Oxford 2015) and calls for the removal of the Rhodes statue in Oxford on change.org, drawing directly on the RMF Cape Town movement's success in eventually ensuring the removal of the Rhodes statue from the University of Cape Town (RMF Oxford 2015b). Consequently, it appears that student leaders at the University of Oxford were inspired by the RMF movement in Cape Town. This flow of knowledge and ideas from the global South to the North - from the colonized to the colonizer - constitutes the second dimension of this paper located primarily within postcolonial scholarship (Comaroff and Comaroff, 2006, 2011, Mbembe 2001; Mamdani 1996; Chatterjee 1993; Abu-Lughod 1990).

Three related questions guide this inquiry: (i) how does the RMF movement draw on theory to inform its disruptive tactics? (ii) why does the RMF adopt specific theoretical frameworks, namely, decolonization, black consciousness and intersectionality, and expressly reject human rights discourses? (iii) to what extent has the RMF movement's adoption of particular theories and tactics in Cape Town, influenced the formation of the RMF movement in Oxford?

Methods

This paper analyzes the theories and tactics employed by the RMF movements in Cape Town and Oxford through interviews with three of the prominent members involved in both movements. Given the various factions within the RMF movement, the

limited number of interviews conducted with Chumani Maxwele (2016), Ntokozo Qwabe (2016) and Brian Kamanzi (2016) may skew the perspective offered in this study. Consequently, interviews are supplemented by references to public statements released by the RMF in Cape Town and Oxford, as well as scholarly analysis of the student movement.

From Theory to Practice

The RMF movement seeks to decolonize education by employing tactics of disruption inspired by postcolonial theory, black consciousness and intersectionality (RMF 2015). At the same time, the RMF paradoxically rejects human rights discourses despite the well-established link between social movements and human rights (Goodale 2009; Cohen and Rai 2004; Niezen 2003; Rajagopal 2003; Keck and Sikkink 1998). The student protestors I interviewed characterized their adoption of Steve Biko (1978) and Frantz Fanon's (1963) theories on the one hand, and their rejection of human rights discourses on the other, as a recognition of the continued existence of "black pain" and a deliberate rejection of whiteness (Maxwele 2016). The RMF movement defines "black pain" in their Mission Statement released on Facebook as "the dehumanisation of black people" (RMF 2015). This dehumanization lies at the heart of their struggle located at the University of Cape Town and is seen as "a violence exacted only against black people by a system that privileges whiteness" (RMF 2015). The RMF movement expressly defines black people as "all racially oppressed people of colour" and adopts this definition recognizing "the huge differences that exist between [these race groups]" (RMF 2015).

In his analysis of the RMF movement, Francis Nyamnjoh (2016) suggests that black pain and white privilege are two sides of the same coin and that consequently, these notions cannot be disentangled. This approach seems to be reflected in the RMF Mission Statement which finds that, "this movement flows from the black voices and black pain that have been continuously ignored and silenced" (RMF 2015). But Achille Mbembe (2015) has questioned the students' reliance on pain, suffering and whiteness to frame their demands suggesting instead that whiteness must be demythologized, failing which, whiteness may inadvertently be reinforced by black students. In addition, while Nigel Gibson (2016) recognizes that the RMF draws on Fanon (1963) to make sense of South Africa's socio-economic and political climate, he asserts that "South Africa is not the postcolony that Fanon is writing about" (p. 2).

Despite the apparent contradictions within the student movement of firstly, reinforcing black pain by mythologizing whiteness, and second, relying on Fanon's postcolony to make sense of post-apartheid South Africa, Mbembe (2015) and Gibson (2016) both characterize the student protests as South Africa's "Fanonian moment." They define this moment as a replacement of the "old politics of waiting" with "a new politics of impatience, and if necessary, of disruption" (Mbembe 2015 cited in Gibson 2016, 8). This new politics is reflected in the RMF movement's Mission Statement which includes extensive quotes from Biko (1978) to argue for a student movement that is deliberately black and that welcomes the participation of white students "so long as that participation takes place on our terms" (RMF 2015).

This strategy of creating a black centered movement that limits the participation of white students, flows directly from black consciousness theory and demonstrates how theoretical frameworks shape social movements, and more specifically, how the RMF enacts and embodies theory through praxis. In addition to drawing on black consciousness, the Mission Statement also refers to an "intersectional approach" (RMF 2015). The RMF movement defines this approach as one that "takes into account that we are not only defined by our blackness, but that some of us are also defined by our gender, our sexuality, our able-bodiedness, our mental health, and our class…" (RMF 2015). Coined by Kimberlé Crenshaw (1989), intersectionality denotes the various ways social forces interact to shape the multiple dimensions of experience and reflects the notion of "interlocking oppressions" (Collins 1990) such as race, class and gender. Intersectionality implies that race cannot be separated from other inequality structures such as gender, ethnicity and class; instead, they intersect and shape each other. These theories appear to contribute to the formation of a collective identity among student activists who draw on black consciousness to develop the idea of black pain, while simultaneously extending this idea through intersectional theory.

At the same time, Richard Pithouse (2015) has warned that "Fanon's name is frequently mobilised as if it carried the kind of authority, sometimes theological or prophetic rather than philosophical or political, that can be deployed to end rather than to enrich a debate" (p. 9). In the context of the RMF movement, where factionalism and divisions emerged shortly after its inception (Nyamnjoh 2016), invoking Fanon or Biko is not only a way of determining strategy and tactics, but may also be used as a mechanism for privileging certain voices above others.

The Movement Away from Human Rights

The RMF movement's Mission Statement only makes one reference to human rights in its critique of the South African constitution's conception of racism. According to the RMF, the constitution "has systematically been used to deter irrepressible urges by black South Africans to challenge racism and violence" (RMF 2015). The Mission Statement goes on to offer a specific example of this constitutional deterrence by criticizing the South African Human Rights Commission's (SAHRC) decision to deem the racially exclusive membership policy of the Forum for Black Journalists unconstitutional.

The SAHRC is an independent constitutional body established to monitor, protect and promote human rights, whereas the Constitutional Court is the highest authority on the interpretation and implementation of human rights in South Africa (Constitution, 1996). In an analysis of the SAHRC decision, constitutional law expert Pierre de Vos (1998) found the Commission's treatment of the racially exclusive membership of the Forum for Black Journalists "slightly surprising" since the Constitutional Court adopts a more nuanced approached to racial discrimination. De Vos (1998) disagrees with the SAHRC decision arguing that the constitution's prohibition of unfair discrimination allows for differentiated treatment in certain instances.

Consequently, while the RMF's critique of the SAHRC decision is supported by scholars such as De Vos (1998), Brian Kamanzi, one of the leading figures in the RMF movement, offers a further explanation for the rejection of human rights. During an interview with Kamanzi (2016), he indicated that when the question of human rights was raised at an open dialogue hosted by the RMF movement, one of the participants suggested that because black people are not seen as human beings, human rights do not apply to black people. This argument appears to reflect Fanon's (2008) writing in *Black Skin, White Masks*: "…a Black is not a man" (p. xii). Since human rights are intrinsically connected to humanness, the arguments presented by student activists about the dehumanization of black people, offer an important critique of human rights.

Nyamnjoh (2016) also believes that abstract formulations of human rights cannot address South Africa's post-apartheid transition, and that the RMF movement's demands are a reflection of the limitations of rights discourses. Legal scholars such as Makau Mutua (2004), suggest that in the "Age of Rights" following the Second World War, South Africa "represents the first deliberate and calculated effort in history to craft a human rights state…" (p. 126). Mutua

(2004) however, finds that South Africa's incorporation of human rights discourses into its constitution was a "mistake" (p. 128). Citing Ibrahim Gassama, Mutua (2004) believes that South Africa's mistake was failing to recognize that human rights can be used by the privileged white minority to protect their economic status as the holder of significant private property rights. These arguments are echoed by student protestors in the RMF movement and may offer further explanations for their rejection of rights discourses.

Despite these critiques, the RMF movement's denunciation of human rights discourses seem counter-intuitive because of the link between social movements and human rights more generally. Employing human rights language could strengthen claims for access to education; a right that is explicitly contained in South Africa's constitution. This rejection of rights discourses in a country described as "a human rights state" (Mutua 2004), may symbolize a denunciation of South Africa's post-apartheid transition to democracy and the politically negotiated, human rights based constitution.

Theory from the South

Jean Comaroff and John Comaroff (2012) pose the following paradox: while the North is often thought to determine social and historical trends, it is the global South that increasingly appears to prefigure these trends and export them to Euro-America. Furthermore, Comaroff and Comaroff (2012) argue that the global South is the driving force of theoretical and social trends by reversing the flow of power/knowledge from local to global. The dominant belief that the South is a late arrival to modernity, is therefore not an adequate way of understanding the role played by the global South. Consequently, Comaroff and Comaroff (2012) assert that it is the South that first feels the effects of global forces and the South that first decodes them theoretically and innovates political responses to them - all of which are then exported to the global North. This argument could potentially extend to the RMF movement's attempts to decolonize education at the University of Cape Town and its subsequent exportation of ideas and knowledge to the University of Oxford.

Based on my interview with one of the student leaders at the University of Oxford, students at Oxford were inspired by the RMF movement in Cape Town and constructed their call for the removal of the Rhodes statue at Oriel College on similar demands made by students in Cape Town (Qwabe 2016). The

RMF Oxford Facebook page describes itself as a "movement determined to decolonise the space, the curriculum, and the institutional memory at, and to fight intersectional oppression within, Oxford" (RMF Oxford 2015). Furthermore, the RMF Oxford movement's petition published on change.org, makes specific reference to the removal of the Rhodes statue at the University of Cape Town, and expressly "supports and continues this vital work by looking to critically interrogate the colonial relations on which Oxford University is founded... We see no reason why here, at the heart of the High Street, at the heart of Oxford, Rhodes cannot also fall" (RMF Oxford 2015b).

At the same time, the strategies used by the Oxford students differ to some degree from the Cape Town students in that white students at the University of Oxford were not excluded by the RMF Oxford movement in the same way that white students' participation was limited at the University of Cape Town. Furthermore, while tactics of disruption were used extensively by the RMF Cape Town activists, the tactics employed by the RMF Oxford students were primarily constructed around protest marches, debates and public gatherings. It is therefore interesting to note how shared theoretical approaches adopted by student movements can result in the employment of distinctive strategies depending on contextual differences. Furthermore, while the Rhodes statue was eventually removed from the University of Cape Town, it remains standing at Oxford. Student movements that adopt similar ideological approaches, may nevertheless employ varying strategies based on their local contexts, inevitably resulting in alternative outcomes.

Despite these differences between the RMF movements in Cape Town and Oxford, it could be argued that the Comaroffs' (2012) theory from the South is reflected in the transfer of knowledge and ideas from the global South to Euro-America. It is evident that RMF Oxford was inspired by RMF Cape Town. Furthermore, both movements are centered around the removal of the Rhodes statue as a symbol for addressing institutional racism, curriculum reform and the under-representation of black students and faculty.

Conclusion

This paper attempts to provide an overview of the RMF movement by firstly, considering how the radical student movement converts theory into practice and second, how the movement at the University of Cape Town influenced the formation of, as well as strategies

employed by RMF Oxford. While some examples are offered demonstrating how the RMF movement interprets Biko (1978) and Fanon's (1963, 2008) theories and converts them into practice, limited academic scholarship makes it difficult to properly interrogate this form of praxis. It is uncertain for instance how factionalism within the RMF movement has affected the interpretation and application of theories. In addition, there seems to be no scholarship on how the RMF movement incorporates an intersectional approach, making it particularly hard to analyze how the idea of praxis manifests beyond the application of theories articulated by Fanon and Biko.

Furthermore, while it is evident that the RMF Oxford movement drew inspiration from student activists at the University of Cape Town, it remains uncertain whether Fanon and Biko's theories were interpreted in the same way by the two student movements. Based on the information currently available, it appears that the strategies employed by student activists in Oxford differs markedly from those employed in Cape Town in certain respects. However, many of the demands made by the students in Cape Town and Oxford share strong similarities. At the same time, this paper offers a compelling case for further research that takes into account the insights and opinions of the students who were actually involved in the RMF movement since these voices are often marginalized in academic scholarship. This future research could contribute to a deeper understanding of the RMF movement as well as to a more nuanced understanding of social movements concerned with decolonizing higher education.

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Japanese Higher Education Reform Trends in Response to Globalization and STEM Demand

Aki Yamada[a,*]

[a]University of Tsukaba, Japan

*Corresponding author: Email: yamada@emp.tsukuba.ac.jp Address: University of Tsukaba, Ibaraki, Japan

Introduction

Modern globalization is a major factor informing higher education policy and recent educational reform. Globalization encompasses a transnational flow of political, economic, and cultural ideologies and values. It is the "product of the emergence of a global economy [and] expansion of transnational linkages between economic units creating new forms of collective decision making" (Torres 1998, p. 71). Globalization has had a substantial impact in the educational field as new ranks of students increasingly have opportunities and the capability to enter higher education and study abroad. Philip Altbach (2013) explains that mass access to higher education has become a worldwide phenomenon, as evidenced by the United Nations Educational, Scientific and Cultural Organization (UNESCO 2016) statistics that global enrollments in higher education have increased 56 percent from 2004, with most recently available 2014 reporting indicating 207 million enrollments world-wide. Amidst these changes is a rising demand for students to enter into the Science, Technology, Engineering, and Math (STEM) fields, which offer high quality jobs that stimulate economic development and fulfill increasing human capital needs in their respective industries. STEM fields comprise majors ranging from chemistry, physics, software engineering, statistics, and beyond. Given the importance of globalization and STEM development in ongoing global higher education reform, this article will examine these trends and how Japanese higher education seeks to drive innovation and global competitiveness through STEM reform.

Japanese government policy directives and individual university programs are turning toward new approaches in internationalization and development of global competencies that challenge the traditional Confucian methodologies typical of East Asian education. Significantly, Japanese STEM students are increasingly expected to become proficient in foreign languages, international communication, and the development of soft skills previously associated with the social sciences and humanities. These changes reflect the desire to produce students who possess broadened skillsets that are needed to excel in a modern globalized economy and knowledge based society.

Globalization and STEM Demand

The nature of globalization has reshaped numerous established institutions, and higher education is no exception. Worldwide, higher education is now facing a major issue of adapting to the changes brought about by modern globalization. Serious competition attributed to globalization drives universities to transform themselves to cope with the rise of a knowledge-based society. Thus, transfer of knowledge and human personnel in a knowledge-based society is regarded as synonymous with internationalization. Increasingly, countries are worrying about their ability to compete within a global economy and their movement towards a global knowledge based society or technology based society. This translates to changing demands in the skills attained at universities, which are particularly apparent in STEM fields. Gisele Ragusa, Cheryl Matherly, and Sarah Phillips (2014) note that globalization, changing socio-demographics, and technological advances are changing the role of engineering in society. The development and integration of new technologies being produced and consumed at the international scale entails both global competition and collaboration. This internationalization of a global stem talent pool is evidenced by a UNESCO (2015) report projecting that graduates from China and India combined will account for 60 percent of the G20 workforce with STEM qualifications by 2030. Thus, beyond technical skills, STEM workers are increasingly being challenged to develop the competencies needed to enter an increasingly global economy.

At the national level, governments and education systems see the STEM fields as key to fueling innovation that drives economic development and international competitiveness in a modern knowledge based society. For example, from an economic standpoint, a U.S. Congress Joint Economic Committee (2012) cites that approximately half the U.S. economic growth in the last 50 years was driven by productivity

gains due to technological innovation. STEM fields are an important aspect of global competitiveness, and many countries have adopted measures to focus on increasing the number and diversity of students pursuing degrees in the STEM fields. Furthermore, market changes are driving a strong demand for a STEM workforce that has been, and is predicted to continue to be, disproportionately higher than those other fields. For instance, from 2000 to 2010, the U.S. STEM field employment growth tripled that of non-STEM field employment. Furthermore, it is predicted that from 2008-2018 STEM field employment will continue to grow at almost double the pace of non-STEM fields (U.S. Department of Commerce 2011). Similarly, the European Centre for the Development of Vocational Training (2014) estimates STEM demand in the European Union countries will grow by 8 percent by 2025, whereas non-STEM fields will only grow by 3 percent. With the challenge to meet this world-wide demand, there are new opportunities for students who possess the appropriate skillsets.

STEM education reform is indispensable to develop students who possess the integrated and flexible knowledge and skills that will solve modern technological and environmental problems. Szu-Chun Fan & John Ritz (2013) surveyed 20 countries and that the two major driving forces behind STEM reform were, "(1) the concern for a qualified STEM workforce that will aid in increasing national competitiveness and (2) the development of STEM literacy within students which might lead to their gaining high-level thinking abilities" (p.10). Massification and globalization have created intense competition for higher education reform targeting internationalization to attract foreign talent, reap economic benefits, and to develop students who have the skills necessary to operate in an increasingly globalized academic and economic context. STEM reform has become a critical high-stakes intersection where the effects of globalization, massification of higher education, and national competition meet. Countries are betting on STEM driven innovation and the global competitive strength of their academia and workforce to elevate their economic standing. Thus, we see that higher education institutions must now adapt and ensure that student learning, assessment, and curricula are updated to reflect significant changes in modern societal demands. Based on the need for global competency, Japanese engineering programs are now introducing aspects of internationalization, the development of collaborative problem-solving skills, and

new courses that challenge students to develop both technical and non-technical skills and knowledge.

Japan Policy Direction

With increasing globalization and fast-paced social change, Japanese higher education must strive to match the changing needs of society and industry in a timely manner. As Japan faces a diminishing and aging population with fewer college entrants and limited natural resources, it is a widely accepted view that Japan must improve its workforce quality, productivity, and increase innovation to remain competitive (e.g., MEXT 2014c, 2015). In 2015, Japan's Ministry of Internal Affairs and Communications (MIAC 2016) found a record high 26.7 percent of the population was 65 years or older. Thus, the Japanese government policy sees science and technology driven innovation as a key to unlocking productivity gains that can compensate for its diminishing workforce. This direction is not new to Japan, as technological innovation was an essential driving factor in the "economic miracle" that led a WWII devastated Japan to become the second largest economy in the world by the 1960s. Such technologies were used not only in the creation of new products, but also served to boost productivity gains through enhanced manufacturing and development techniques. Importantly, post WWII innovation in machine and chemical industries were heavily aided by the importation of foreign techniques and technologies, underscoring an understanding of the benefits of global ties that extend to Japan's current situation (Uchino 1969). In order for Japan to create STEM driven innovation and ensure workforce with the skills needed to compete globally, this paper will look at three focal points of Japan's STEM reform policies: increased internationalization, comprehensive human resource development, and curricula that directly prepares students and researchers to address the actual demands of Japan's economy and society. At a high level, the 5th Basic plan, adopted in 2016 by Japan's Council for Science, Technology and Innovation (CSTI 2016), recognizes the intertwining issues at the intersection of STEM and globalization, and sets forth policy recommendations aligned with these three points, which will be discussed in turn.

Increased Internationalization

Japanese educational policy has placed new importance on significantly increasing the number of

incoming and outgoing international students and faculty, and developing the competitiveness of universities at the international level. The Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) National Reform Plan, targets include doubling the number of Japanese students studying abroad and the number foreign students studying in Japan by 2020 (2014a). Globally, student mobility has reached new heights, evidencing a segment of the world-wide rising demand for qualified STEM graduates. Per an Organization for Economic Cooperation, Development (OECD, 2013) report, from 2000 to 2011 the number of international students in tertiary education more than doubled, with Asian students making up 53 percent of international students in 2011. As a frame of reference, we can look the United States as the leader in international admissions, where international students in U.S. higher education institutions have nearly doubled to 1,043,839 over the past decade, with, 41.5 percent studying in STEM fields (Institute of International Education [IIE] 2016). This "brain gain" is a substantial boon to national competitiveness, as these students provide funding, elevate the programs they belong to, and many seek to remain and work in the United States post-graduation. Likewise, Japan sees an opportunity to become more competitive in utilizing this increasingly large pool of global talent to supplement its diminishing domestic workforce. While international enrollments in Japanese higher education has increased, it is still making up for multiyear decline caused by the Great Japan Earthquake of 2011. New internationalization policy has helped to Japan recover to a new total of 152,062 international student higher education enrollments in 2015, up from 121,012 in 2005 (Japan Student Services Organization [JASSO] 2016). Students majoring in Science and Engineering fields alone accounted for 18 percent of these enrollments. Beyond attracting talented foreign students, higher education institutions with international faculty and researchers are seen as better able to develop international research networks, facilitate joint university initiatives, enhancing the prestige of Japanese schools and companies at the global level.

With the move toward a more globalized and knowledge-based society, a new metric for quality in Japanese education is the production of students with ability to succeed both domestically and have the potential to be global leaders in the international context. Thus, increased internationalization of faculty, students, and program requirements facilitate the development of students with global competencies, such as foreign language and intercultural communication skills. Yet, a serious challenge to this goal is the trend that young Japanese have become increasingly wary of international ambitions, and are more often content to limit themselves to domestically, both in academics and the workplace. For instance, a 2013 Sanno Institute of Management survey of new graduates found that 58.7 percent of respondents did not wish to work abroad, up significantly from 28.7 percent in 2004 (as cited in Yonezawa 2014). Among those who responded negatively to opportunities to work abroad, 65.2 percent cited lacked confidence in language, and 50.4 percent cited uncertainty about life abroad. Aiming to address such cases of lack of interest and participation internationally, educational policy is placing new emphasis on foreign language ability for Japanese students and faculty. The introduction of foreign language instruction and integration of international students and faculty seeks to boost Japanese confidence in foreign communication and cultural understanding. Programs are increasingly introducing higher expectations for English competency in qualitative assessments, in addition to integrating English courses and curriculum that integrate aspects of internationalization into degree requirements. While these measures are not strictly limited to STEM fields, it is quite significantly, that they are being applied to STEM majors, where curriculum changes supporting internationalization requirements act in opposition to a traditionally technical skillset orientation in student development. As English has been established as the international language for academia and business, proficiency in it has implications in the post-graduation workplace, where employees can then be called upon to facilitate international business, and can be sent to the international branches of Japanese companies. Thus, amidst increasing globalization and student and workforce mobility on a global scale, Japan's higher education seeks to address deficiencies that would prevent its future STEM workers from reaching their ability to act as global citizens who can succeed in an international knowledge-based society.

There are many concrete policies which are being implemented to increase the numbers of incoming and outgoing international students and faculty, and developing the competitiveness of Japanese universities at the international level. In 2014 the MEXT (2014b), selected 37 universities to spearhead this effort under its "Top Global University Project" (TGUP). Under the project, selected universities have been categorized into two groups, arbitrarily designed "Type A" and "Type

B." The 13 Type A universities receive funding to support efforts in attaining positions in the top 100 world-class university rankings. 24 Type B universities will focus on driving internationalization of Japanese society through their programs. This is no small shift, in total the 37 universities of the TGUP account for 2.82 million, or 20 percent of all students and faculty staff in Japanese universities (Matsumoto 2015). Universities are expected to integrate comprehensive internationalization and reform by recruiting talented foreign faculty and students, increasing English accessible curriculum and collaborations with international institutions. Participating universities individually design programs carry out these directives using methods of their choosing. The TGUP has also set ambitious program-wide goals for attracting foreign talent, including raising classes conducted in foreign languages to 21.9 percent, raising availability of English translated class syllabi to 69.3 percent, and having 47.1 percent of full-time faculty staff as international or having received degrees at foreign universities (Matsumoto 2015). As an example, TGUP funded program focusing on STEM, it is instructive to look at the Kyoto Institute of Technology's (KIT 2014) plan calls for raising foreign language criteria such that 50 percent of undergraduate and 80 percent of graduate students meet a Test of English for International Communication (TOEIC) score of 730. The TOEIC English test for non-native speakers is a widely used standard for measuring English proficiency among Japanese universities and during workplace hiring. According to the TOEIC administering Educational Testing Service (ETS), in listening and reading Japan was globally ranked 39 out of 46, with a mean score of 513 in 2015. Substantial foreign language usage and meaningful interactions with foreign students help Japanese students develop skills to operate globally. Kawamura (2016) measured cultural competency using the Intercultural Development Inventory framework and found measurable positive development in intercultural competencies at four highly internationalized Japanese universities, affirming the relevance of efforts to develop global competencies for Japanese students who remain in Japan. Programs like these further seek to increase international leadership skills through joint classes with international students instructed in English, and the addition of overseas internship program requirements. To support such requirements, many university programs are establishing international ties through overseas bases, joint degrees, and collaborative research agreements. The Kyoto Institute of Technology (2014)

describes their program's ideal human resource product as a "tech leader" combining expertise, leadership abilities, ability to use foreign languages, and a strong Japanese identity. Increasing mobility, internationalization, and global citizenship will only lead to more frequent situations requiring international collaborators to carry out cross-cultural projects in both academic and industry settings. As such, even STEM students who traditionally specialize in a single technical field are now being expected to gain new competencies in foreign language, cultural awareness, and overseas experience.

Heightened Human Resource Development

To cultivate graduates to lead Japanese industry in collaboration, innovation, and entrepreneurship, Japanese higher education policy increasingly favors technical STEM fields to incorporate interdisciplinary knowledge and skills through the introduction of humanities, social sciences, and other fields. While STEM fields have traditionally focused narrowly on providing graduates with the specialized technical knowledge and skills, they are now also seeking to develop soft-skills in global competency, teamwork, leadership, and problem-solving abilities, to supplement their primary field studies (Ragusa, Matherly and Phillips 2014). Interdisciplinary studies are being valued for the development of critical thinking, broader perspective from alternate fields of study, and the ability to translate ways of thought between different fields. Representing the receiving industry perspective on Japanese education reform, the Keidanren Japan Business Federation (2016), has called for, "Science and engineering majors with broad educational background that includes humanities and social sciences; and, humanities and social science majors with broad educational background that includes basic knowledge of advanced technologies and math and science." Top Global Universities like the Nara Institute of Science and Technology, and the University of Tsukuba with its Empowerment Informatics Program implement such interdisciplinary programs for STEM field students. The 5th Basic Plan outlines the opportunity for innovation that is sought by broadening perspectives through interdisciplinary research:

In the midst of rapid expansion and innovation on the frontiers of knowledge, academic research grounded in researchers' intrinsic motivations is not only creating new interdisciplinary and integrated

cross-disciplinary areas of research, it is also becoming a source of innovation, with the potential for the creation of additional innovation across a wide range of fields. (CSTI 2016, p. 38).

By considering perspectives and knowledge from non-technical perspectives, researchers become more aware of the holistic value of their research to society. Additionally, interdisciplinary studies give students opportunities to prepare for working and presenting their accomplishments to diverse groups of stakeholders, who may not share the same technical perspective.

To create strong leaders, who can communicate and succeed in global environments, it has become advantageous for Japan to introduce aspects of Western education to allow students to work within different cultural and social frameworks. The Japanese education system, along with other Asian education systems, are built upon a strong Confucian basis that is known for its rote memorization and passive learning rather than active student participation, such as in peer learning activities, group debate, or student discussion. Learning in Japan is traditionally teacher-centric, where prepared lesson plans are strictly followed and students learn material in a passive manner, without questioning or debate. The strength of this system is that students tend to excel in math and science subjects, and this is reflected in international evaluation metrics provided by tests such as the Programme for International Student Assessment (PISA), in which East Asian students from China, Singapore, South Korea, and Japan are consistently among the top scoring students in quantitative skills assessments (OECD 2013). Highly developed quantitative skills in science and mathematics can be considered as the greatest strengths of East Asian education. However, the passive Confucian learning model often overlooks the development of the soft skills that are valued in Western education and society, such as critical thinking, problem solving, and spontaneous discussion and debate. To address this deficiency, Japanese higher education institutions are beginning to introduce aspects of Western pedagogy into their curriculum.

To address the need for global competency and the ability to collaborate and lead internationally, Japanese university programs are starting to adopt a new hybrid model that combines aspects of the traditional Confucian educational model and a Western style of active learning. More Western style courses are used to encourage the use of student-centric discussion, debate, and collaboration, preparing Japanese students with soft skills and communication practice needed to operate in less hierarchical international contexts. Carolina Valiente (2008) found that due to cultural differences in communication and collaboration, East Asian students encountered difficulties when trying to excel in Western environments, resulting in their contributions being overlooked or disregarded in favor of more assertive and outspoken students. Thus, as universities focus on creating globally competent students, the introduction of Western pedagogy helps prepare students to operate and compete in international contexts.

Student-centered learning is cited as an important method to improve learning outcomes and student motivation, self-reflection, and engagement (European Network for Quality Assurance in Higher Education [ENQA] 2015; Yamada 2014). While active learning is conducive to developing the skills required for global citizenship, it is also important for quality assurance purposes, where students and faculty engage in meaningful discourse, and develop relationships associated with higher motivation, satisfaction, and educational outcomes. Previous studies have shown the benefits in engagement, and learning outcomes under a faculty and student partnership in teaching and learning (Cook-Sather, Bovil, and Felten 2014). One favored example of student-centric and active learning is engaging students in problem based learning. While instructors of these classes facilitate coursework and discussion, students are expected to analyze real-life issues, to take steps in response to problems, and to work out strategies to propose and present pragmatic and effective solutions. These cooperative problem-solving skills are viewed as important for global citizenship and international collaboration post-graduation. While it is essential that students be capable as individuals, important values are gained through the ability both to contribute and share knowledge and skills with others and to understand and incorporate ideas into a joint solution with other individuals from different educational and cultural backgrounds. Working in groups provides opportunities to practice expressing ideas and presenting them to others constructively and logically. Numerous studies show the importance of collaborative problem solving in the 21st century workforce, which is transitioning from manufacturing to globally distributed teams working in information and knowledge based services (OECD 2015).

Fulfilling Societal Needs

A third key point of Japanese higher education reform affecting STEM is a shift to prioritize policy and curricula that reflect the needs of society, and setting to human resource development goals to match these needs. Thus, an additional measure of the quality of education is a graduate's development of skills and knowledge that can be transferred to the workplace and meet the demands of Japanese society. In a 2013 interview, the former Minister of Education and Science, Hakubun Shimomura, commented on the critical state of Japan's higher education: "Japanese universities are like isolated ivory towers. Their refrain has long been 'freedom of education and research,' but you suddenly realize they have been unable to cope with today's realities. Few are globally oriented, and few are in sync with the needs of today's society at home" (Tanikawa 2013). Japanese higher education seeks to create national innovation by establishing and strengthening appropriate linkages between industry, academia, and government (MEXT 2015). Because Japanese society follows a concept of long-term employment, crosspollination and transfer of individuals and knowledge to bridge the three sectors have been lacking in the past. Especially in the context of STEM, new policy seeks to drive innovation through continuous relationships, as opposed to separate and segmented ones, such as the divisions between basic research, applied research, and development research (CSTI 2016). Tsukuba Science City and Kansai Science City are cited as locations where this desired continuous feedback and reinforcement of cross-sector ties occurs and results in increased innovation. Another such example is the Nagaoka University of Technology's creation of a "GIGAKU Techno Park" network, where joint industry-academia-government projects are undertaken, both in Japan and abroad. Many programs in the Top Global University Project seek to establish structural ties to industry as part of their curriculum. Furthermore, industry internship assistance and graduation requirements are being used to ensure that students gain hands on experience grounded by societal needs.

Case Study: University of Tsukuba Empowerment Informatics Program

Driven by government efforts like the MEXT's Top Global Universities Project (TGUP), Japanese universities are adapting to changing expectations and setting new goals in STEM and internationalization. The University of Tsukuba's was selected as a Type A university under the TGUP, seeking placement in the global top 100 university rankings. Its Empowerment Informatics Ph.D Program (EMP) is cited as an example of a program undertaking higher education reform at the intersection of STEM and globalization discussed above. The EMP seeks to develop internationalization by actively recruiting foreign students and faculty, providing a curriculum that can be fulfilled through English coursework, and offering institutional support for international students. The program encourages meaningful integration of domestic and international students, as some required courses for domestic students are taught in English. Thus, international students can enroll in courses alongside Japanese students and are encouraged to work together in groups for coursework and research projects. The addition of Western style classes encourages active participation and student engagement in group learning environments that favor discussion and debate that are often lacking in Japanese style classrooms. Additionally, the program has formal international ties through partnership with five foreign universities representing the UK, France, Netherlands, and USA, and foreign faculty are invited to assess and provide guidance to projects being worked on by EMP students.

To improve human resource development aspects of its graduates, the EMP targets three aspects of student learning that extend beyond technical expertise:

1. Frontline: The ability to solve problems in the academic, industry, and public spheres.
2. Presentation: The ability to communicate effectively and convey the nature and importance of research achievements.
3. Interdisciplinary: The ability to consider issues from multiple perspectives, to see the "big picture," and to approach issues with creativity and innovation.

As outlined above, problem based learning and interdisciplinary studies are sought to develop critical thinking skills, and introduce team-based problem solving involving multiple perspectives and fields of study. Another unique aspect of the EMP is that it embraces the notion of "STEAM," referring to the incorporation and interaction of the arts within STEM studies. The program mixes students from both engineering and arts backgrounds to work on collaborative projects that have practical outcomes.

As Japanese higher education seeks to better align towards the direct needs of society, the EMP demonstrates a commitment toward this goal. One of

the key aspects of the program is a cycle of exhibition and refinement of student projects through feedback from the general public, as well as academic and industry experts. Student projects are demonstrated at local events such as the Tsukuba Media Art Festival, and globally at special interest international events like the Ars Electronica Festival, and the ACM SIGGRAPH. Additionally, the EMP integrates advisors and partners with major corporations like Panasonic, Nissan Motor Co, Hitachi, NEC, Shiseido. Several practicums are embedded into the EMP curriculum, consisting of advisement from industry professionals, a six-month collaborative project in an industry workplace, and a three-month research period preparing research proposals and working in inter-disciplinary laboratories. Through industry involvement students gain insight into bridging their academic work into the workplace and society as a whole. The EMP blend of internationalized, interdisciplinary, and problem based learning projects seeks to develop well-rounded skill sets that are constantly being guided by both academic interests, and real-world application and evaluation.

Conclusion and Discussion

Growing demand for STEM field workers and heightened attention toward globalization have started to reshape the mission of higher education STEM programs. Higher education reform in response to globalization and STEM demand are often intertwined, as globalization of higher education has affected who is studying STEM and their education and workplace opportunities. Combining the challenges posed by globalization and the demand for high quality STEM graduates, higher education reform needs to prepare STEM students to innovate and solve important problems that stretch beyond geographic, cultural, socio-political, and domain-knowledge boundaries. Japanese higher education reform seeks to develop global human resources who can meet these needs through increased exposure to internationalization. At the same time, Japan is recruiting foreign students, faculty, and researchers help develop its international research networks, and supplement its shrinking domestic workforce. Western pedagogy and active learning techniques that develop soft skills are being utilized to prepare graduates to undertake collaborative work with experts across different academic fields, and to work in teams where team members supplement each other's skills and knowledge. At the individual level, technical research

skills are increasingly being combined with broader knowledge from international and interdisciplinary studies.

Advances in STEM research and development are core to economic growth and the creation and growth of new industries, which manifest themselves in the products and technologies that we use in our daily lives. However, Akiyoski Yonezawa (2014) points out Japanese youths still maintain "inward looking attitudes" and skepticism toward the need and marketability of global skills. Most students will remain within Japan upon employment, and in entry-level positions they are unlikely to realize gains from foreign language ability or cross- cultural training in their daily work. Yet, the educational reform strategies outlined in this paper are driven by a long-term vision where the Japanese workforce needs to be able to compete in an increasingly globalized labor market. Long term policies like the Top Global University Project extend until 2023, so there is still much time to reveal how internationalization and reform efforts will fare. Future studies will be needed to evaluate whether Japan's current policy changes result in an effective workforce that raises its ability to compete at the international level academically and economically.

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Implementation of Team Based Learning (TBL) in a Lebanese Medical School

Rami Hawi[a,*]

aAmerican University of Beirut, Lebanon

*Corresponding author: Email: rh156@aub.edu.lb Address: American University of Beirut, Beirut, Lebanon

Medical education has experienced major improvements throughout the twenty first century which imposed crucial changes in the undergraduate medical curricula. The change entails teaching skills, learning manners, and assessment tactics. However, these approaches were combined with the egression of interdisciplinary approaches and new-fangled educational needs such as "communication skills, professionalism, teamwork, and leadership skills" (Zbheib, Dimassi, Akl, Badr and Sabra 2016, p. 1017).

In addition, medical education approaches in the United States (US) are being taken to new levels that add a minor change on the traditional lectures, by incorporating not only knowledge in a student but also compassion and teamwork skills (Lefter, 2016). Some of the implemented approaches in the US that are recently being used are Active Learning Groups, Interprofessional Education (IPE), Online Self-Learning Modules, Small Group Discussion, and Team-based Learning (TBL). These approaches are basically introduced in the basic-sciences phase during the first two years of a medical student. However, the practice of the TBL approach is growing to cover most medical schools in the US, as it is considered to be a way to help physicians to become members of the pupils' teams with less hierarchical structure within the traditional classroom and more focus on the acquisition of problem solving skills (Lefter, 2016).

TBL is considered to be one approach of group learning which aims to substitute lectures with "self-study" and "group exercises." The group style learning aids to implement the information acknowledged through problem solving. TBL is also entitled to be a way of flipped classroom where students are encouraged to understand the information on their own. In this manner, class time will be more focused on the analytical, synthetic mental processes, and on incorporating more cases solving and decision making (Zgheib et al. 2016).

TBL was evaluated in ten different medical schools at the beginning of 2003 and it was reevaluated after two years of its implementation in 2005 in order to determine the progression of the TBL (Thompson, Schneider, Haidet, Perkowski and Richards 2007). The study showed that nine out of ten schools continued to employ TBLs throughout their courses and one school neglected the process since there was no buy-in from the faculty members and students. As for the other nine schools, faculty, administration and students have recommended an ongoing process of TBLs and expressed their gratitude of the new approach (Thompson et al. 2007). In addition, Dr. Nathalie Zgheib and her colleagues (2016) shared a longitudinal follow-up study on the undergraduate medical students which elicited a progressive impact on students by building teamwork skills and scoring better on the team performance test rather than the individual ones. The study also showed that TBL has a positive influence on students' professionalism, communication skills and personal development (Zgheib et al. 2016).

TBL was first implemented at a business school in Oklahoma in the early 1990s, and then the use of TBL started increasing progressively to universities in USA and Canada. This progression affected Lebanon in the beginning of the academic year in 2007 where the Pharmacology department at American University of Beirut (AUB) decided to shift from didactic sessions that were given for medical students to adopt the use of the student centered approach as a trial for the pharmacology classes (Zgheib et al. 2016). The usage of the TBL classes in the faculty of medicine department is now used in classes throughout the first three years of medicine study. This transformation was a result of a curriculum change that affected the entire faculty of medicine department (Zgheib et al. 2016).

TBL implementation is considered to be one of the modern approaches that integrates active learning in the new curricula. Its process of implementation requires the need of an organization to have both a strategic plan and to ensure that individuals gather up towards the same organization's strategy or goal (Sculley, 1987). The main process of implementation of any strategic plan is centered on having a well-operational and unified system and it is also based on attaining effective contribution by all stakeholders (Wyk & Moeng, 2014).

TBL main concept is to correlate communication and interpersonal skills, encourage teamwork, build up discussions among classmates, and to make students capable to send and receive comments (Zgheib et al. 2016). In addition, several researches in Lebanon, noticed that some medical universities have undergone changes in the curriculum to implement such new student centered techniques to encourage student teaching/learning process. Some examples include laboratories, internet assisted learning, simulation labs, virtual teaching, and distant learning. However, American University of Beirut is considered to be the only university in Lebanon to have implemented the Team-Based Learning approach in its curricula. Paul Koles, Arienne Stolfi, Nicole Borges, Stuart Nelson and Dean Parmelee (2010) demonstrated that using TBL in medical academic curriculum has an effect on the academic performances of students. Adoption of TBL leads to a better understanding of the course content. It was also found that students scoring low on academic achievements tended to profit better than those who were high academic achievers (Koles et al. 2010). As a result, medical universities in Lebanon have incorporated TBL sessions in their curriculum and their students are performing much better through exams rather than following traditional didactic lectures learning. In essence, students claimed that TBL stimulated them to study on regular basis and that TBL aides them to actively learn from and teach peers at the same time, which helped improving students' performance scores (Vasan, DeFouw, & Holland, 2008)

This paper conducts the encouragement of TBL implementation in a medical school in Lebanon by stating and clarifying the components and usage of the TBL process. In addition, advantages, challenges and recommendations for a good TBL implementation are stated in the discussion to build up a strong argument to implement TBL in a Lebanese medical university (Zgheib et al. 2016).

Main structures and components of TBL

Each module throughout the pre-clinical academic years includes a certain number of TBL sessions depending on the content to ensure the students' grasping of the main course concepts. Thereby, every TBL session encompasses the following: team formation, assigned readings and objectives, individual readiness assurance test (IRAT), group readiness assurance test (GRAT), application exercises, and formative/summative assessments.

Team Formation

TBL is known as a big classroom teaching style where it gathers all class students in one big classroom. Students in TBL sessions are divided into five to seven members per team depending on the number of students. The team formation is randomly aggregated and depends only on two factors: pre-experience (grades), and gender. The teams are usually shuffled three times during an academic year, taking into consideration that the student does not partner again with a pre-team member. This process is done in order to maintain equity among team participants and to encourage the high level students to teach the poor level ones. This would promote the latter to put more effort on TBL materials preparation before coming to class.

Assigned readings and objectives

Prior to the TBL sessions, students are given home reading assignments to prepare. These materials include the preparation for the Readiness Assurance Test (RAT) process and the contents that are going to be covered in class. In the old traditional system, assignments were done through giving the students lectures that have been tackled in classes (Sabra & Zgheib, 2016) These materials include the main concepts and ideas that need to be understood in order to solve the problem set of questions in the TBL session (Michaelsen & Sweet, 2008)

Individual Readiness Assurance Test (IRAT)

This test is held at the beginning of the TBL class where students are faced with "Multiple Choice Question" and are requested to select one best answer. The test is distributed per individual and is usually given about ten questions in length with four to five multiple answers. Students often receive a minute per question, depending on the difficulty level, and they are requested to solve the questions and select their responses accordingly on a Scantron sheet form of paper (Burgess, Ayton, & Mellis, 2016) This test assesses the understanding of the pre-class preparation and the students' readiness to apply the knowledge acquainted to solve the problems given (Sabra & Zgheib, 2016) The questions should mainly focus on the main concepts, not small details, and therefore be challenging to stimulate team discussion (Michaelsen & Sweet, 2008)

Group Readiness Assurance Test (GRAT)

After students complete their IRAT and hand in their Scantron sheet papers along with the questions, each team is given a folder where it encompasses several documents. One of the papers is the GRAT where students are supposed to work on the same individual test, but in allocated teams. However, this test is

accompanied with a special form called IF-AT cards ("intermediate feedback assessment technique", attached below in appendix A). According to Drs. Ramzi Sabra and Nathalie Zgheib, these given forms are "self-scoring answer sheets" that deliver immediate feedback about the correct answer (Sabra & Zgheib, 2016). Students are expected to reach consensus among their team members regarding the GRAT questions through interactions and discussions, thereby each team is expected to find the star mark in every correct scratch, if the first attempt was not successful, they should keep on trying to uncover the boxes of the IFAT forms until the mark is revealed. However, the score diminishes with every wrong attempt, if a correct score is achieved from the first attempt of scratching, the team will score a full grade which is "4" per question, those who answer from the last trial will score zero. The grades at the end of the IFAT paper will be summed up and calculated to deduce final score of each team (Burgess, Ayton, & Mellis, 2016). The IFAT forms are considered an instrument to promote both notion understanding and cohesiveness in educating groups (Michaelsen & Sweet, 2008).

Application Exercises

This section of TBL comes directly after the GRAT. Team members find in distributed envelops papers entitled "Application exercises". These papers are usually printed out equally as per the number of students in each group where they are requested to solve the applications together. In this process students are able to use extra sources/lectures that were assigned to them. The application exercises include open book problem exercises where students can relate their concepts and knowledge obtained to solve the given problems and make group decisions. According to Drs. Sabra and Zgheib this section represents a significant problem where students are asked to select by consensus an answer to determine their choices in solving the case or the problem given (Sabra & Zgheib, 2016). At the end of this section, when students complete the exercises within the specified time, each team is requested to use letter cards that are present in each distributed team folder upon the demand of the facilitator and raise the letter that shows the best answer that fits the teams choice, this process is repeated for every question. When teams are faced with different answers, selected teams need to provide evidence regarding their choices to defend the answer selected and convince other groups in the classroom. Therefore, students tend to learn more from the wrong agreed answers rather than confirming on correct answers (Michaelsen & Sweet, 2008).

Formative/Summative Assessments

As per my observation through the TBL classes, formative and summative evaluations are considered as crucial for both individuals and facilitators.

Formative Assessment

After every TBL session, students are encouraged to fill in the evaluation forms that are attached to the team files after completing the sessions. The formative assessment table example, Table 1, represents four different criteria and have five different ranking levels (Zgheib et al. 2016). The table emphasizes on the level of students grasping the TBL concepts by checking the top rank "to a very high degree" or the other lower ranking levels.

TABLE 1: FORMATIVE ASSESSMENT TABLE RANKING

Question	To a very high degree	To a considerable degree	To a moderate degree	To a small degree	Hardly at all
The session taught me how to apply what I learnt from the lesson material					
The session enhanced my understanding of the material					
The session stimulated my interest in the material					
The case promoted critical thinking					

Summative assessment

This assessment is completed by students by the end of every module to determine several aspects throughout the course. The summative evaluation advised is the "360 evaluation". The 360 evaluation asks each student to fill in some questions regarding the module, instructors and TBL peer members, where students of each group are asked to state some feedback on each other and he/she needs to post also a feedback on the self. This type of evaluation is anonymous which makes the students feel comfortable when filling them. No one would know about the results of the evaluations except for the course coordinator and chairperson. This type of evaluation is done in order to detect the feedback of the students regarding the course and the student-centered approaches that are being used in the curriculum such as TBLs and to perceive what sections need to be improved and adjusted. This evaluation process is usually posted electronically for students once every academic module, where individuals have to fill-in the form for each person in the same TBL team. The peer evaluation

includes questions related to communication skills, professionalism, and personal development. The aim of this appraisal is to render students accountable for their own preparation and participation among their team members. It is a way to probe individuals to contribute more in the process of team work (Cestone, Levine, & Lane, 2008).

Studies show that TBL is accompanied with several positive learning outcomes along with some barriers. This shows the success or failure of the TBL in the context of implementing such a newfangled approach in the Lebanese medical education program. Moreover, the below descriptive analysis of this new approach provides valuable insights that assist individuals in the TBL implementation.

Advantages of TBL

Benefits for students and group members
   Encouraging Higher-Level Learning
Case discussion is a way to provide students with the chance to apply their understanding of the concepts to resolve the problems given. Thereby, application exercises aim to foster accountability and "give-and-take" discussions first within the group itself, then among other teams (Michaelsen and Sweet 2008).
   Learning about the Quality of Teamwork
According to Michelson and colleagues, student groups have the impression that the teams are outperforming their best member. In their paper, they were able to determine the average of each student scores, low, average, and high and compared the results with the team performance score related to the individuals. Thus, the results were compared from the first use of TBL; the authors show that almost 99.9 percent throughout the past 20 years, 1,600 teams have outperformed their own best member. In addition, Michelson and colleagues demonstrate that the lowest group scores among these groups tested had grades better than the highest individual marks (Michaelsen and Sweet 2008).
   Learning about Themselves
One of the crucial roles of TBL is that it generates conditions where students are allowed to learn about their interactions with others throughout the connections that students make within group members and teams. Through the time, members tend to learn more about their teams, they acknowledge the strengths and weaknesses of individuals in the teams (Sweet and Michaelsen 2012). This enhances the students' interactions; thus, each would discover different ways

to teach and communicate with other members. Nevertheless, this process encourages the students to build up strong interpersonal relationships among group members (Michaelsen and Sweet 2008).
   Mastering the Concepts
Students tend to master the basic science concepts from the modules through TBL sessions. For instance, the latter provides, if implemented correctly, more than just accurate knowledge; it gives a depth of understanding that is collected by solving a set of clinical based questions which combines all the TBL team efforts to complete. Students throughout this process gain an insight on their capabilities, discovering their individual and group strengths and weaknesses (Michaelsen and Sweet 2008). As per Slavin (1990) cooperative learning would lead to an escalation in student performance when individuals accountability are assimilated in the cooperative methods.

Benefits from an Administrative Perspective
Several advantages elicit for the administrational section, if the TBL is well implemented:
1. TBL implementation would lead to operative, self-managed learning teams where less load on the administrational part is required, since professional and faculty members will be less involved in training facilitators.
2. TBL is considered to be cost-effective in the implementation since the process will just require the usage of large classrooms. Thereby, TBL is successfully employed across all medical academic programs.
3. The assignments given through TBL process lessen the possibility for interpersonal conflicts within team members. This decreases the part where administrators need to deal with such personal or political debates raised by students (Michaelsen & Sweet, 2008)

Benefits for Faculty
TBL is a way where students are prompt to engage discussions among each other and clarify their own point of view through evidences. This would decrease the load that comes on the faculty sides, where they do not need to maintain traditional lecture-based teaching. When TBL is well implemented:
1. Tutors seldom have to worry about the attendance of students, materials grasping and pre-preparation of students before the TBL sessions, since students will have a RAT process that is graded by the end of the session. This would encourage all students to attend the class, and throughout their presence and preparation,

students will have the chance to grasp the concepts very well through the discussions that are being initiated in class (Sweet & Michaelsen, 2012).

2. When students come prepared to class, instructors will not be dealing with empty vessels, but on contrary they will be dealing with colleagues that are well informed about the topic unlike what usually happens in traditional lecture-based sessions.

3. Teachers tend to promote better relationship with students since they act as listeners and observers of the sessions unlike traditional way where teachers act as one lecture based communication. This would create a bond between students and teachers where both become "partners in education process" (Michaelsen & Sweet, 2008)

Barriers Confronting TBL Implementation

Poor Content Expertise

Lack of content proficiency affects mostly novice teachers, where they depend highly on course books and materials; thereby, they tend to be a chapter ahead of their students. This creates a problem when students ask such questions outside the current chapter and readings which new teachers are not able to answer. This might jeopardize the success of the TBL application (Lane, 2008).

Tutor-Centered Concentration

Teachers are considered to be the center of the class and most of them think that they are not supposed to relinquish their positions even during student-centered sessions. However, researchers have demonstrated that instructors must abandon their lecturer skills as experts sometimes in order to have a deep learning of students; whereby high level of interactions and engagements among students need to happen (Lane, Teaching Skills for Facilitating Team-Based learning, 2008).

Defensiveness of Instructors

When teachers are faced with a group of questions and challenges from unified students, they tend to feel unable to answer so they act defensibly by imposing a certain concept without eliciting clarifications. This leads students to a state of frustration (Lane, Teaching Skills for Facilitating Team-Based learning, 2008).

Lack of Clarity about the TBL Content

Some teachers place the content of their TBL sessions without understanding the main reason of the TBL sessions. For instance, they place content of the

applications without providing opportunity for students to apply the basic concepts acquainted which is considered to be one of the main facets of a TBL session (Lane, Teaching Skills for Facilitating Team-Based learning, 2008).

Inadequate time for Course Reform

Redesigning a course from traditional lecture to a TBL format requires lots of effort and time. Thus, facilitators when selecting to transform such sessions to TBL, they are requested to prepare different stages of questions and cases: RAT, and application exercises. This process usually takes time and is needed to be prepared ahead of the session (Lane, Teaching Skills for Facilitating Team-Based learning, 2008).

Factors and Recommendations for a Better TBL Implementation

Buy-In

Wyk and Moeng (2014) explain that creating a new strategy requests a deep understanding of what the organization strives to achieve in order to initiate the change effectively. This is done through collaboration among faculty members, administrators and students to achieve a "coherent vision and collegial culture" in the organizations (Kaufman, Herman, & Watters, 2002). Therefore, buy-in is a crucial process that is requested from faculty members, administrators, and students. It would help teachers have the traits of "willingness", "interest", and "enthusiasm" about using the TBL teaching approach, as it is a way to apply resources in a different framework. Buy-in requires from students to have "openness", "receptiveness", "willingness" to change methods, and "cooperation". As for administrators, buy-in requires the acceptance mainly from the dean of the faculty (Thompson, et al. 2007).

Report

Reports should be made in order to document the results of the TBL implementation after every module completion. It is considered a way of communication among the stakeholders to provide decision making, whereby the school board such as the chairperson/Dean of the medical education should be also included in order to move forward with the implementation process (Kaufman, Herman, & Watters, 2002).

Management and continuous improvement

An educational team should be assigned to follow up with the implementation of the TBL process and promote what the medical pre-clinical curriculum is using to match the meanings with the ends and be able to achieve the mission and vision of the organization

(Kaufman, Herman, & Watters, 2002) Management of the TBL needs to be handled by the management of the organization.

Expertise

The know-how of the TBL needs to be garnered through continuing training sessions for faculty members whether from national or school workshops. In addition to mentoring other skillful facilitators that are using the TBL approach which is elicited by monitoring facilitators from a different university that has the current program implemented (Thompson, et al. 2007).

Resources

A large classroom is requested to be able to conduct a TBL lecture that includes large number of students. Moreover, good seating arrangement needs to be provided since each session is about two hours long. Also, sound proofing walls would be preferable to allow adequate interactions among the teams itself and different groups without bothering neighbor classes. In addition to a question bank for each module is advisable for the RAT processes along with the application exercises to facilitate the access for teachers to choose among questions. Finally, an assigned personnel needs to be employed to take care of the calculation process of the TBL grades and make sure to prepare the equipment and supplies needed for every single session (Thompson, et al. 2007).

Time

Materials need to be developed at the onset since TBL preparation is judged to be time consuming and needs lots of efforts from teachers. Time flexibility in the curriculum is also considered important since the process of every TBL session takes more than a normal class lecture period (Thompson, et al. 2007). Despite the barriers that are mentioned above, I would definitely encourage the implementation of TBL in medical schools since the latter plays a vital role in the ongoing learning process. It also has a positive influence on students and instructors at the same time, since TBL invigorates the classroom and make teaching/learning become pleasurable, energized and non- repetitive.

Conclusion

A transition is taking place over the years in all medical education to shift from conventional to modern teaching and learning. Therefore, Lebanese medical universities need to be aware that TBL is one of the vital approaches in education that leads to a better understanding of the materials and concepts. Medical universities in Lebanon should start bridging the self-

educational gap and accommodate with the TBL growth that is happening around the world. In addition, Team-based Learning is determined to be one of the self-teaching approaches where students learn more and come to classes more prepared. It has also a crucial impact on students' engagement in their lifelong learning when they become ascertain that the course is relevant, the instructor is reliable and what they are learning eventually matters (Lane, 2008). Despite the disadvantages listed above, several positive benefits are elicited from the TBL on the instructor since this new mode of teaching invigorates the classroom and makes teaching more stimulating. Furthermore, implementing the above recommendations to maintain a well surrounded TBL environment would aid pupils and facilitators to have a positive and significant experience along their academic years. There has not been any longitudinal follow up studies on the influence of TBL on students after the pre-clinical years. Studies are only done within the two years of basic sciences but they do not determine the effectiveness of TBL approach on students after the basic sciences phase.

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APPENDIX A