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Edited by Yvonne Masters

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From the Editor

Dear Readers,

Welcome to the first issue of the *IAFOR Journal of Education* (Volume 6 – Issue 1) for 2018. This issue sees some changes in the editorial team. I took over as editor on January 1, 2018, and two new associate editors were appointed on February 3, 2018. We are also currently in the process of appointing new editorial board members and peer reviewers. This is an exciting time for the journal and we are looking forward to building on the successes of the past.

It would be remiss of me to not pause in this editorial to acknowledge the immediate contributions of both Bernard Montoneri and Lucy Spence as editor and co-editor of the journal. Bernard took over as the editor with Volume 2 – Issue 1 in 2014 and remained editor until the end of 2017. He had, however, been active with the journal in its first year in 2013. Lucy became co-editor of the journal in 2016, but relinquished her position at the end of 2017. We wish them both well in their continuing research and publishing futures.

Thanks are also due to Cassandra Atherton and Vasileios Paliktzoglou who have both served as associate editors in the past. They are still members of the editorial board. Massoud Moslehpour is also thanked for his work as an associate editor from Volume 5 – Issue 2 in 2017 and he continues today as an associate editor.

We welcome Lynda Leavitt and Raimond Selke, both who have been previously active with the journal, as new associate editors.

The *IAFOR Journal of Education* prides itself on being international, intercultural and interdisciplinary, the three pillars of IAFOR. It draws its articles from a range of disciplines and cultures, linked by a common interest in education in its broadest sense. In this issue we have authors discussing education in Japan, Malta, Nigeria, Saudi Arabia, Turkey, and the United Arab Emirates. While the contexts are different, the themes are relevant to educators globally.

The articles in this issue cover a range of themes: the role of faculty members in the first year of higher education; scientific literacy and self-efficacy among pre-service teachers; the discussions of female students about their relationships with male "partners"; acquisition of listening skills among Japanese students; teachers' knowledge indices and student academic performance in Nigeria; the juxtaposition of power and trust in educational relationships; and foreign language proficiency as an asset for Japanese graduates. Each of these topics have relevance in other settings.

We hope that you enjoy these articles, find application for them in your own contexts, and consider sharing your own research and experiences in the journal.

Yvonne Masters
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Notes on Contributors

Article 1: The Implicit Role of First-Years' Higher Education Faculties

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Article 4: An Examination of Listening Acquisition: A Study of Japanese University Students

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Article 5: Teachers' Knowledge Indices as Predictors of Secondary School Students' Academic Achievement in Kwara State, Nigeria

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The Implicit Role of First-Years' Higher Education Faculties

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Abstract

The higher education experience is a challenge for first-year students. One of the challenges facing a generation of youth is attaining professional skills, academic experience and occupational training. In order to have a clear picture of the challenges involved in first-year experiences it is important to examine elements impacting first-year students' adjustment to university and in particular on the dual faculty role. This opinion paper posits that higher education faculties play an important role in the successful adjustment of first-year students, not only in facilitating their learning, but in impacting students' well-being and their growth as better citizens. The findings from this paper were drawn from various studies looking at the importance of first-year faculties in higher education, which involved extensive literature reviews and reported interviews with university stakeholders. The paper offers higher education leadership insights into the complex factors at play and the dual role faculties hold.

Keywords: first-year student, higher education, quality teaching

Introduction

Undertaking higher education is an important landmark for newly enrolled students in the period of initial adulthood. The higher education experience is both an opportunity and a challenge for first-year students. If a first-year student cannot adjust to the new university setting swiftly they may encounter difficulties in their learning and psychological progressions (Stirling, 2017). The younger generation today faces the challenges of a multi-dimensional and competitive world of work and exceedingly specific roles. As such, they spend prolonged periods in educational institutions to attain professional skills, academic experiences and occupational training. (Symonds, Schwartz & Ferguson, 2011). Becoming a first-year higher education student after being a final-year student at a secondary school echoes the phenomenon of shifting from the oldest and most influential group of students in the primary school to the newest and least influential group of students in secondary schools (Najdanovic-Visak, 2017). Correspondingly, the progression into a university setting comprises moving to an extended, more equitable or learner-oriented faculty structure, communication with peers from more diverse geographical regions and sometimes more diverse backgrounds. Experience indicates a greater emphasis on academic performance and its evaluation (Radojicic, Milenkovic & Jeremic, 2017).

The university environment also requires the process of creating new social networks, friends, altering existing associations with family members, and adapting to the new learning setting. An effective adaptation to university settings implies an ongoing and flexible process of accepting a new lifecycle in college, appreciating psychological welfare and achieving learning objectives (Najdanovic-Visak, 2017). This means that graduates who can manage a strong, universally competitive economy or transnational corporation perform better compared with their poorly adjusted peers. Joining the university demands more accountability and some students may doubt their competency to be effective at the university level, which may reduce their learning success and can cause an upsurge in their anxiety levels. Scholars suggest that some students adapt well to the university environment while others encounter difficulties with the progression, some dropping out of university altogether (Uttl, White & Gonzalez, 2017). Nevertheless, the elements impacting first-year students' adjustment to university are multifaceted; in such cases, the dual role of the first-year faculty emerges in the sense that educators not only fulfil their teaching role, but also their role as advisors, mentors and supporters of students.

This reflective paper suggests that higher education faculties, particularly those in the first years of student transition, play a significant role not only in the successful transition of students into higher education facilities by way of learning, but also in providing a significant support role, impacting student well-being. The paper first discusses the benefits of higher education and the general transition of students to higher education and the adjustments involved. This is followed by a discussion on the concept of student-centred learning and the dual roles that faculties play during the student transition period: providing not only the foundation for successful learning, but also in supporting students to have a sense of becoming better independent learners.

The Benefits of Higher Education

The benefits and significance of higher education in the past decade have increased, and continue to expand, as examinations by various stakeholders aim to provide more specific results in the higher education field (Noaman, Ragab, Madbouly, Khedra & Fayoumi, 2017).

At present, the opportunity to advance one's studies in higher education institutions is considered a significant privilege, considering the role of the financial factor that is a persistent limitation for some students (Arbel, Bar-El & Tobol, 2017). One of the benefits of higher education is associated with achieving a high level of economic growth and stability (Schendel, McCowan & Oketch, 2014). Therefore, educators promote school reforms across different countries in order to help them improve their existing economic systems (Sriarunrasmee, Techataweewan & Mebusaya, 2015). From this perspective, students have recognized that investing in their higher education is an important and worthwhile precondition for their economic success and the success of society (Blaskova, Blasko, Matuska & Rosak-Szyrocka, 2015). In fact, researchers have assessed the long-term implications of education, which implies that individuals may think from diverse perspectives when it comes to achieving certain educational outcomes (Singh, Misra & Srivastava, 2017).

Another significant benefit of higher education relates to the idea that the respective institutions foster lifelong learning, which is an essential factor in helping students become better persons, leading healthier and meaningful lives (Jarvis, 2017). By improving the personal lives of individuals, higher education improves the entire social system in the sense of contributing to its smooth functioning (Ma, Pender & Welch, 2016). Highly educated people tend to demonstrate an active involvement in different social activities (Griffiths, 2016). The reason why education improves people's well-being is that such individuals apparently realise that the potential and knowledge they have can help them change the world in one way or another (Nolan & Molla, 2017).

In terms of major social benefits pertaining to higher education, educated individuals contribute to expanding social unity and trust. In this context, society functions better as a united community, which is possible only through the diverse values promoted by higher education (Sriarunrasmee et al., 2015). The feeling of togetherness, along with the emphasis in ongoing cooperation, has helped many people in a positive way by changing their views about society and higher education (Gonondo, 2017). As a result, a substantial number of individuals demonstrate their willingness to work together on finding appropriate solutions to emerging social problems (de Kraker, Dlouhá, Machackova Henderson & Kapitulcinová, 2017; Kellett, & Goldstein, 1999). Being properly educated means that people are most likely to have shared goals in terms of social development and improvement initiatives (Griffiths, 2016).

Therefore, the insights they may share can be quite helpful for further enhancing the role of society in modernity. Higher education has emerged as the prerequisite for shared democratic practices promoting the relevance of freedom, flexibility and creativity in society (Shephard & Brown, 2017). Individuals who are highly educated can have an opportunity to have a successful career, indicating that such people are generally wealthier and more socially stable compared to their uneducated counterparts (Sriarunrasmee et al., 2015). Thus, it appears that pursuing higher education is related to both personal and social benefits that can significantly multiply once individuals have recognised the limitless possibilities of learning in today's knowledge-based, digital society. Education is the right answer to all those who may have any doubts regarding their future development as individuals and professionals in a certain field (Linse, 2017). In this way, higher education institutions succeed at preparing people for the challenges they may encounter by giving them the proper knowledge and tools to thrive in modern society.

Student Transition to Higher Education

Scholars frequently utilise the term "transition" as an alternative word for "adjustment", "integration" and "adaptation" (Uttl et al., 2017). It illustrates an individual's efforts to endure in their societal and physical setting. Scholars describe the transition process to higher education as a way in which the student tries to deal with anxiety, academic performance and conflict and attain their learning objectives (Najdanovic-Visak, 2017). In this progression, the student also tries to sustain coordinated relationships with the setting, which means that the help of the first-year faculty is crucial in such cases. In the process of transition to higher education, the two key elements are the student and the university environment (classrooms, faculty members, tutors, principal, administrators and student services). Students in higher education typically come from diverse ethnic backgrounds and have diverse customs, norms and ethics (Blaskova et al., 2015). The university and its faculties have their own objectives, standards and principles that educators incorporate into the institution's aim, vision and core standards (Uttl et al., 2017). Students must fit in with the university setting through altering their own attitudes, vision and activities to the appropriate level of those of the university. The adaptation varies from one student to another depending on the progressive phase of the learner. Newly enrolled university students have little knowledge about course scheduling. For instance, new students have been in secondary school, where teachers arrange or program every activity for them, as well as allocate school-work time – all students have to do is follow the program (Hogan, Fox & Barratt-See, 2017). Therefore, faculty members ought to provide these students with the mentoring and support they need to better adjust to their new university environment.

First-year students join the university with unexpressed and indistinct enquiries about their own personality and the globe – queries that academic institutions and parents never probe (individual personalities) further at the initial stages. They join the college community with an eagerness and passion that may soon become dissatisfaction (Sezer, 2016). During their time in university, students deal with a number of activities, many of which they are encountering for the first time, comprising new settings, friends, class mates, exposure to diverse cultures and a new outlook. Scholars argue that when students are unable to cope with these initial activities they are likely to struggle (Uttl et al., 2017). If first-year students do not experience a feeling of satisfaction or they are not ready to adapt to the new setting of a college campus and faculty they could simply become vulnerable to anxiety and depression.

For most university students, the progression to the university classroom requires an adaptation to academic practices and expectations. They must study efficiently to enhance their learning habits. Classrooms may be larger, tutors have diverse instructing styles and teaching approaches, assignments are extensive and benchmarks are higher (Sezer, 2016). Students need to stabilize their personal and academic priorities. The academic domain, courses and syllabus in higher education turn out to be rather sophisticated and complex for the first-year student. The complexity can be predominantly greater for students coming from ethnic and language backgrounds that are dissimilar to those supporting the foremost principles of higher education organisations (Khoshlessan & Das, 2017). Research demonstrates that educational demands increase with time and new societal relations develop when students join higher-level education, thereby the dual role of the first-year faculty is an important element in supporting students to become not only excellent learners but also better persons (Poorman & Mastorovich, 2017); first-year students are often unclear of their competencies to attain these learning demands.

Social Adjustment

First-year students may also be unable to adapt to the environment due to many social reasons. In some instances, the sole support structure students have encountered prior to joining college was in the home atmosphere; first-year students must encounter the university experience individually, without the security of an accustomed and responsive support system. Subsequently, numerous first-year students discuss feelings of isolation and homesickness as an outcome of their lack of adaptation to the university environment (Uttl et al., 2017). Although these students may establish many social associations, this does not essentially prevent aloneness and homesickness (Blaskova et al., 2015). It is the value of the association that influences students' aloneness in their new university environment. With regards to the progression into university, student social support is the most vital component in decreasing negative outcomes, such as anxiety, depression and loneliness (Baker & Robnett, 2012; Cho & Yu, 2015). Students' social adaptation to college has been related to students' overall transition to higher education (Hogan et al., 2017). The assessment of social adaptation refers to determining how efficiently students react in their environment, demonstrate involvement in social programs and their gratification with several social factors of the college experience (Simmons, Creamer & Yu, 2017; Trolian & Barnhardt, 2017). The university social setting requires flexibility on the part of newly enrolled students. The student union has a strong influence on new students' lives, typically because they have a need to transform family and community networks with student support networks (Sriarunrasmee et al 2015). First-year students, hence, expect others to like and acknowledge them, which contributes to their own satisfaction as being part of the new university environment (Dornan, 2015). First-year faculties can clearly communicate such a need. As stated previously, joining the university often signifies the youth's initial experience in developing and preserving the individual personality outside the home (Blaskova et al., 2015).

Personal – Emotional Transition to Higher Education

The personal-psychological transition of students to higher education refers to the emotional anxiety and mind symptoms linked with the transition process itself (Gautam, Lowery, Mays & Durant, 2016; Rahat & Ilhan, 2016). First-year students experience concerns of being a stakeholder in the college. They also want to demonstrate themselves to their fellow classmates. It seems that unsteady and distressed students tend to perform less efficiently in their education in proportion to their ability than students who experience better adjustment (Uttl et al., 2017). Failure to comprehend the significance of adjustment at college may be a core factor in certain psychological issues (Nolan & Molla, 2017). Numerous first-year university students encounter various psychological health problems, with higher education institutions determined as "ideal" incubators of psychological health issues (Budescu & Silverman, 2016; Ceyhan, E. & Ceyhan, A. A., 2011). Scholars contend that there are numerous reasons for these health issues such as lack of finance to attain fundamental needs (which is a common situation for college students in developing economies), along with other factors, for example adapting to college life, pressure to achieve success, time management and task completion (Sriarunrasmee et al., 2015).

New Models for Quality Teaching in Higher Education

The core transformation in education over the past five decades suggests an upsurge in the demand for non-routine mental and interactive competencies and a fall in the demand for

long-established cognitive and craft competencies, non-skilled labour and tiresome physical roles (Frey & Fisher, 2015). Graduates participate in a world of competitiveness, dominated by greater uncertainty, flexibility, risk, globalisation and cross-cultural communication (Kim, 2016; Onnis & Dyer, 2017). Higher education institutions, and the approach of learning promoted by educators whilst at college, need to help students adapt to such a setting and prepare them with appropriate competencies, insights, principles and qualities to flourish in it (Sriarunrasmee et al., 2015). There is a strong determination to develop and boost knowledge, together with comprehending the importance of professional life and restructuring the theory of knowledge in academic situations (Blaskova et al., 2015). Strong connections with occupational life through diverse academic initiatives provide reliable opportunities to acquire both generic and professional competencies, as well as to strengthen networks and job pathways after acquiring an undergraduate qualification. Colleges/universities across the globe face the challenge of discovering ways of demonstrating their quality, not only in the teaching of students but also how they connect to business objectives and industry (Linse, 2017).

Learning entrenched in occupational life could facilitate higher education institutions to understand and react more effectively to the issues of this setting, utilising other types of schooling and learning models such as a project-based approach. Higher education can no longer be preserved by a set of disciplinary specialists who share knowledge with students. Both the difficulty and ambiguity of society and the competitive marketplace will require higher education organisations to incessantly acclimatise while maintaining quality teaching standards (Linse, 2017). Having become the central point of the education approach in many regions of the globe, universities will have to comprehend how to efficiently serve students (Figure 1) (Bhardwaj & Kumar, 2017; Pescaru, 2017).
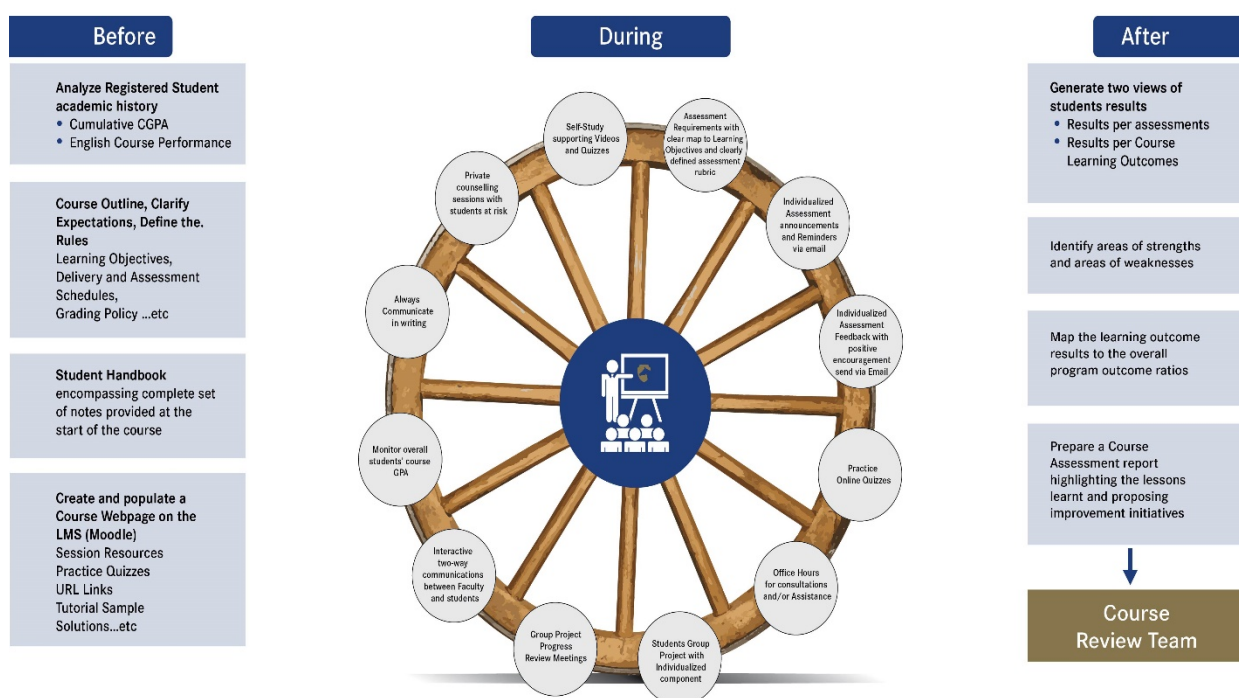

Figure 1: The Explicit Role of First Years' Faculties

Alternatively, students seem to have become more attentive about equality, and demand student-oriented teaching and academic opportunities (Blaskova et al., 2015). They aim to complete their education to get a desirable job and strengthen their social attachment. Students' ability to influence learning quality is immense as they have access to the right services at the time they need them to improve their commitment (Sriarunrasmee et al., 2015). Student involvement can take diverse arrangements (on podiums and through classroom presentations, extended student gratification surveys, instantaneous feedback approaches, among others.). Student involvement is mostly influential as a tool of quality instruction when it comprises collaboration and not simply data on the student's learning experience. The implementation of modern teaching approaches, along with an increasingly diverse student base, place the subject of equity at the very core of quality teaching issues (Tweddell, Clark & Nelson, 2016). With this assessment of learning, the responsibility of faculty members and teachers is transforming.

The Student-Oriented Approach of Higher Education: Helping Students to Adjust

Much of the capacity encircling undergraduate education and student learning refers to the two key functions of university or college faculties (departments within the academic institution): schooling and research (Linse, 2017). The parameter of time assigned to these two responsibilities is one of the most prominent issues in higher education (Khan, 2017). It is unfortunate that much of the discussion on the structure of faculty work finds its basis in myth, assessment and prediction. There is a myth, for instance, that how a faculty member teaches and interacts with students in the higher education experience results in improved student knowledge gains (Sriarunrasmee et al., 2015). However, it is important to debunk or corroborate such a myth. Hence, evaluating the influence that faculty member behaviours and communications with students in the tutorial room have on classroom experience and student performance is important.

The most vital role of faculty members (tutors, consultants and school administrators) is to improve the student learning experience. Diverse teaching approaches can be found in many institutions to improve student educational achievement, but tutors frequently lack the comprehensive training or the support required to implement those approaches in the classroom. University administrators should decrease the opportunity costs of testing in the tutorial room and permit faculty deans or members to develop unique and effective teaching approaches across various departments (Linse, 2017). The use of faculty members in initial warning systems has become a norm in many universities as they play a crucial role in identifying vulnerable students depending on their adaptability and on their apparent impact (Morales, Grineski & Collins, 2017; Roksa & Whitley, 2017).

Research demonstrates that around 75% of colleges and universities in the United States have created or acquired an early warning framework, but there are certain problems in terms of utilisation (Sriarunrasmee et al., 2015). Permitting faculty members to modify academic risk and contribution protocols can facilitate the need to advance the levels of enthusiastic participants. The university chancellor and academic deans must boost the significance of primary warnings among faculties and demonstrate their effect on facilitating students in an appropriate manner (Linse, 2017). Student support programs tend to emphasise the most vulnerable students; however, mentoring programs for students should also take into consideration high-achieving students. If students are unable to establish a considerable connection with their faculty in their first academic year they may experience difficulties as they enter the higher level of education. Focusing faculty mentoring initiatives on groups

such as students who are educationally on track, but who lack involvement in a faculty community or student group, can assist in building extended participation among this decisive group (Byl, Struyven, Meurs, Bieke & Koen, 2016).

Utilising a learner-oriented methodology is an effective mode of designing instructive materials to facilitate first-year students since it aims to encourage students by precisely targeting their individual education needs (Blaskova et al., 2015). In contrast to conventional teaching approaches, where the design of instruction is from the standpoint of the teacher, a learner-oriented approach aims primarily to meet the student's educational needs from the standpoint of the student (Linse, 2017). Internationally, colleges and universities discuss the significance of adopting new student-oriented learning approaches resulting in the growing implementation of non-traditional techniques and strategies by progressive academic institutions (Partanen, 2016). The student-centred methodology comprises more than the pursuit of modern techniques; it involves an incorporated idea of education (Sriarunrasmee et al., 2015). Comprehending the knowledge-centred approach to instruction requires an insight into the element of power in the tutorial room. In a learning-oriented setting tutors do not discriminatorily make all the decisions about teaching; rather, they discuss these decisions with their students in order to bring consent.

A student-oriented classroom does not cater to student impulses in a way that decreases academic consistency. As a substitute, it offers strong learning positions, facilitating students to comprehend and apply knowledge. Many universities support their faculties in establishing student-centred tutorial rooms through their instruction, learner centres and student services (Blaskova et al., 2015). Faculties also collaborate with other faculty members in efficiently creating and delivering first-year course outlines (Bryant, 2016). However, faculties frequently encounter challenges in managing the time to join learning workshops or use social media websites to offer tips on boosting accessibility and adaptation for first-year students. Despite the advantages drawn in the literature, educators do not consistently utilise Universal Instructional Design (UID) as the teaching framework (Pliner & Johnson, 2004). Educators face several obstacles in adopting these approaches. Initially, implementing a new teaching structure needs collaboration, joint decision, leadership and administrative assistance (Linse, 2017).

Without assistance, it is complicated for faculty members to acquire training on UID, get access to adequate facilities and modern technologies, or restructure course syllabi. From time to time, universities may consider UID approaches as being too complex to adopt in practice because of suggestions that emphasise the need to integrate modern technology into each tutorial room (Bryant, 2016). Additionally, adverse attitudes from various students about implementing these approaches in undergraduate education may act as an obstacle to utilising UID. Accepting the UID framework requires that one adopt the standpoint that approachability issues exist within conventional teaching methodologies and that this influences the academic performance of all learners (Sriarunrasmee et al., 2015). As discussed above, tutors must take into consideration the variations in students' individual learning approaches. Research on learning approaches (e.g. surface vs deep learning), and the 3 Ps model (Pressage-Process-Product) developed to express the interactions between lecturers and students from the point of view of the expectations that both would have of the teaching and learning process, is substantial, with changeable and sometimes inconsistent learning systems (Ak, 2008).

Effective teaching must comprise some reflection on the diverse ways in which students learn, which can help students become better learners and persons over time. Scholars tend to agree that there are specific variations among students that considerably influence the learning process (Sriarunrasmee et al., 2015). With these concepts as support, a rising number of scholars and experts have gradually admitted that conceptualisation has a constructive effect on the academic experience of students (Blaskova et al., 2015). Conceptual teaching and academic activists indicate that, through this approach, students can develop initial knowledge (comprehending specific ideas or notions), process knowledge (the competency to use this knowledge practically), incorporate knowledge (comprehend the associations between the knowledge acquired), and acknowledge their human aspects (the competency to acknowledge one's self), boosting substantial learning by interacting with fellow students at every phase (Linse, 2017). The subject of transferable abilities, or students' abilities to exhibit the capabilities acquired through one framework in another, has become a clearer objective in many contextualised initiatives. From a metacognitive standpoint, transferable abilities reflect the outcome of "learning to learn". In other words, the learner has established themselves as an effective learner by becoming more cognisant and self-oriented, as well as significantly competent in conducting more effective analysis and using that learning approach in other arenas (Singh et al., 2017).

The Critical Roles of First-Year Faculties During the Student Transition Period

Innovation in the teaching and learning process can present certain challenges to higher educational institutions. The dual role of the first-year faculty implies that the focus on different responsibilities may be difficult for educators, as being in the position of a persistent change mode may lead to substantial uncertainty (Abbott-Anderson, Gilmore-Bikovski & Lyles, 2016). The extensive focus on innovative practices in the educational field may bring the opposite results in terms of frightening potential students and faculty staff. Thus, it is important to implement ongoing monitoring mechanisms and strategies in order to address any emerging challenges.

Yet educators should constantly encourage experimentation in various teaching practices, emphasising the distinct role of educators to serve as change agents, mentors, advisors and persons who support and guide students in their transition into higher education (Redmond, 2015). In this way, it is possible to understand the faculty's dual role as reflected in a wide range of activities pertaining to the smooth transition of students into their academic advancement at a later stage in their lives (Nolan & Molla, 2017). Academic educators are those who promote the view that higher educational institutions fulfil their role external and internal roles as learning organisations. From this perspective, faculty responsibilities have been progressively expanded to identify various teaching and learning situations that can facilitate students' transition to higher education (Blaskova et al., 2015). Faculty teachers have the necessary skills and tools to anticipate different challenges during the process of transition. Therefore, faculty teachers have been able to gain the trust of their students who recognise the importance of following certain role models in their respective faculty.

Guiding students throughout their transition to higher education is among the most significant roles of faculty teachers (Redmond, 2015). This means that such educators show substantial dedication to the distinct purpose of education, which refers not only to the idea of teaching students important concepts, but also in the overall understanding that first-year or general education courses represent a relevant stage for learners to build the foundation for lifelong learning. Moreover, such a stage is crucial for students to realise the potential they have to

become better citizens, which means that faculty teachers have complied with the requirements of their social role in education (Blaskova et al., 2015). Faculty educators need to ensure a holistic approach to education, which is the venue in which students can grow in both personal and professional aspects. Such teachers tend to have a solid impact on students' decisions for professional realisation and academic progress (McNickle, 2014; Warr Pedersen, Pharo, Peterson & Clark, 2017).

Educators in the role of change agents clearly understand their institutional contexts (Redmond, 2015). In this way, they present appropriate change initiatives that actively involve students. Faculty teachers are responsible not only for making change happen in their field but also for emphasising the relevance of students taking individual responsibility for their own actions (Willegems, Consuegra, Struyven & Engels, 2017). Moreover, faculty teachers may need comprehensive support structures, which show their distinct approach towards the teaching and learning process as a whole. As a result, students will feel more confident in undertaking the next stage of their academic growth and development (Blaskova et al., 2015). Learners tend to feel empowered after they encounter highly responsible, creative and inspiring faculty teachers who provide them with the right model for transition to the higher education environment (Davies & Gonzalez, 2017; Del Gandio, 2017). In this way, those students find it possible to rethink and even improve their approach towards education, which is a multifaceted phenomenon that can bring about substantial change in people's lives (Nolan & Molla, 2017).

In discussing the two paradigms pertaining to the dual role of first-year faculties, the support expected by teachers at this time is crucial in facilitating students' transition into higher education. It is important to reconsider the dimensions of traditional faculty appraisal/evaluation as a way to optimise the teaching and learning process (Orland-Barak, 2014). The focus on conducting regular performance appraisals of faculty members implies that educators undertake significant measures to improve the quality of instruction and guidance demonstrated to students. In addition, teachers can enhance different aspects of scholarship and research after carrying out specific performance appraisals (Blaskova et al., 2015). The most important aspect is to ensure quality, integrity and flexibility of the entire educational system. The role of self-assessment is that of a useful tool in emphasizing the job requirements and responsibilities of faculty members. However, some educational evaluation systems often ignore the critical role of "faculty as life coach". This highlights the fact that the role of life coach has important implications for students' professional lives at a later stage and, as a faculty, we should aim to help students become better people (Hennissen, Crasborn, Brouwer, Korthagen & Bergen, 2008).

Academic success is multidimensional, and the role of faculties in helping students become successful in their lives is fundamental. In fact, educators need to assist students to have an optimal college/university experience, implying that faculty members should demonstrate dedication to student development and success (Nolan & Molla, 2017). As a result, students can experience relevant opportunities to build life and leadership skills. At the same time, in the role of life coach, faculties can help students create sufficient balance and manage stress effectively, irrespective of the challenges they may encounter. Students' self-confidence can significantly increase, which can further motivate them to pursue their goals for the future (Fazel, 2013).

Conclusion

This paper explored two essential paradigms about the role of first-year faculties or general education in undergraduate degrees in higher education institutions. The first paradigm indicates that the first-year is crucial in setting the foundation for certain degree courses in which students can develop their learning potential (Blaskova et al., 2015). In fact, educators can guide students through the ongoing process of building a foundation of knowledge on a wide range of specialisation topics that can further help them refine their choice for professional realisation in their lives.

The second paradigm discussed in this paper is related to the belief that educators should design general education courses in such a way as to help students become better persons (Fazel, 2013). As illustrated, these two paradigms reflect the dual role of first-year faculties. On the one hand, teachers extensively focus on using optimal faculty practices to help students obtain relevant knowledge of different educational concepts and ideas; on the other, the intrinsic role of the faculty is to guide, support and assist in the student's academic transformation to becoming a university student, irrespective of the major they pursue (Nolan & Molla, 2017). In this way, first-year faculty members are the unacknowledged change agents who play the role of transition catalysts in the life of many students. As a result, students successfully adapt to their professional learning environment later in their lives (Blaskova et al., 2015). Educators also assist and guide students in becoming better persons who can serve others with adequate self-confidence, empathy and understanding (Audrey, 2017; Elias, 2010; Stanford, 2014).

It is clear that first-year faculties play an important role not only in the successful transition of students to the university environment but in assisting them to become better citizens. Future research should therefore further explore the dual role of first-year faculties to determine the most successful intervention strategies to positively impact students' lives.

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Pre-Service Elementary Teachers' Scientific Literacy and Self-Efficacy in Teaching Science

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Abstract

Many educators and educational institutions worldwide have agreed that the main goal of science education is to produce a scientifically literate community. Science teachers are key to the achievement of scientific literacy at all levels of education because of the essential role they play in preparing scientifically literate individuals. Studies show that pre-service elementary teachers need to build more confidence in teaching science and scientific literacy during their teacher education programs in order for them to successfully teach science knowledge to their students. Therefore, the purpose of this study is threefold. First, pre-service elementary teachers' scientific literacy levels were examined. Second, pre-service teachers' self-efficacy beliefs were measured by distinguishing between their personal and subject-specific self-efficacy beliefs. Third, the extent to which pre-service elementary teachers' scientific literacy levels and self-efficacy levels are related was investigated. Participants were 49 pre-service elementary teachers registered in two science methods courses (introductory and advanced) at a mid-sized university in the United States. Quantitative data were collected using the Test of Basic Scientific Literacy, the Science Teaching Efficacy Belief Instrument-Preservice, and Beliefs about Teaching. Results showed that participants had a satisfactory level of scientific literacy. However, pre-service teachers had borderline scores on the Nature of Science scale. Regarding self-efficacy, findings showed that both groups had the highest self-efficacy in teaching biology and the lowest in teaching physics. Participants in the advanced science methods course exhibited a moderate preexisting positive relationship between scientific literacy and subject-specific self-efficacy in teaching science.

Keywords: elementary education, pre-service teachers, scientific literacy, self-efficacy

Introduction

Having an enriched, scientifically literate society is important because understanding and resolving many public issues require some scientific background. Since people encounter science and its laws from the moment they wake up till the moment they go to sleep, all citizens should have some level of scientific literacy (Hazen & Trefil, 1991). In the context of the public, scientific literacy refers to the understanding of science that allows an individual to participate in socio-scientific topics and to make informed decisions on these issues, as well as the appreciation of processes, values, and ethics related to science (Dawson & Venville, 2009).

Furthermore, science teachers are key to the achievement of scientific literacy at all levels of education because of the essential role that science teachers play in preparing scientifically literate individuals (Chin, 2005). To achieve this goal of having a scientifically literate society, one must ask how to effectively prepare pre-service teachers for science teaching. Despite the number of science methods courses and science courses taken, pre-service teachers continue to enter their student teaching semesters and professional careers with low science teaching efficacy beliefs (Harlen, 1997; Murphy, Neil, & Beggs, 2007; Tosun, 2000). These studies attributed the cause of low self-efficacy among pre-service teachers to the lack of understanding of scientific ideas, challenges in applying certain required teaching skills, a lack of science content, and misconceptions about science.

This study provides additional insight for educators in teacher-preparation programs seeking to identify pre-service teachers who are experiencing the Dunning-Kruger effect, a psychological concept described by Kruger and Dunning (2009). Pavel, Robertson, and Harrison (2012) offered a useful explanation about this effect:

> Kruger and Dunning identified a tendency for people with relatively lower skill levels and knowledge to overestimate their ability to accomplish a task, whereas people with relatively higher skill levels and knowledge would tend to underestimate their ability to complete a task. (p. 126)

On the basis of this concept, educators in teacher-preparation programs should identify pre-service teachers with high levels of self-efficacy in teaching science and those with low levels of scientific literacy. In other words, these pre-service teachers will have a false sense of confidence about teaching science. These groups of pre-service teachers are at high risk of making errors and reaching mistaken conclusions when they teach science due to their low scientific literacy levels. What makes the matter more concerning is that they will not realize their mistakes due to overestimated levels of self-efficacy in teaching science (Kruger & Dunning, 2009). As such, educators in teacher-preparation programs should take into account the relationship between scientific literacy and self-efficacy beliefs toward teaching science when evaluating their pre-service teachers. Therefore, the purpose of this study is threefold. First, pre-service elementary teachers' scientific literacy levels were examined. Second, accurately measuring pre-service teachers' self-efficacy beliefs by distinguishing between their personal and subject-specific self-efficacy beliefs. Third, the extent to which pre-service elementary teachers' scientific literacy levels and self-efficacy levels are related was investigated.

Literature Review

Pre-Service Teachers' Scientific Literacy

Many educators and science education organizations have attempted to define the term scientific literacy. Some researchers view scientific literacy as a person's ability to think critically and rationally about science in relation to potential personal, social, political, and economic challenges and problems encountered in everyday life (Bacanak & Gokdere, 2009; Karamustafaoğlu, Cakir & Kaya, 2013). Other researchers argue that a scientifically literate person should understand clearly both the impact of science and technology on society and the nature of the science itself (Altun-Yalcin, Acisli & Turgut, 2011; Chin, 2005; Cavas, P., Ozdem, Cavas, B., Cakiroglu & Ertepinar., 2013; Ozdemir, 2010). Despite some disagreement over the precise definition of scientific literacy, there is a consensus that an aim of science education is to ensure that learners are scientifically literate. In this study, scientific literacy will be defined in line with that of the National Research Council [NRC] (1996), which stated that scientific literacy is an individual's ability to identify scientific matters underlying national and local decisions, to express positions that are scientifically and technologically informed, and to assess the quality of scientific information on the basis of its sources and the methods used to generate such information. The NRC's (1996) definition of scientific literacy, unlike other definitions, includes the ability to discuss and assess scientific and technological material.

Several studies have examined the levels of scientific literacy of pre-service elementary teachers in teacher preparation programs. The results, which compared the scientific literacy levels of pre-service teachers in the first and fourth years of the teacher preparation programs (e.g., Cavas et al., 2013; Karamustafaoğlu et al., 2013), demonstrated that pre-service teachers in both grade levels have borderline to low scientific literacy levels (e.g., 68 out of 110 items and 48.35 out of 100 items, respectively) and require improvement. Other studies examining pre-service teachers throughout their four-year teacher preparation program (e.g., Altun-Yalcin et al., 2011; Ozdemir, 2010) demonstrated that pre-service teachers in their final year have the highest scientific literacy levels.

The majority of research (Altun-Yalcin et al., 2011; Bacanak & Gokdere, 2009; Cavas et al., 2013; Chin, 2005; Karamustafaoğlu et al., 2013; Ozdemir, 2010) about pre-service elementary teachers applies quantitative research approaches to examine scientific literacy levels. For example, Karamustafaoğlu et al. (2013) sought to determine the level of scientific literacy and information technology literacy among pre-service science teachers. Additionally, the researchers intended to find out if there was a relationship between scientific literacy and information technology literacy among the science teacher candidates. Furthermore, the researchers collected data from the participants by administrating two instruments: the Scientific Literacy Test (SLT) and the Information Technology Literacy Scale (ITLS). The SLT consists of 100 items that focus on the participant's knowledge in scientific literacy, which is closely related to this study. However, the ITLS aims to measure the participant's literacy in Information and Communication Technologies (ICT), such as problem-solving capabilities in ICT and technical skills in ICT. The researchers found that the participants had low scientific literacy levels (48.35 out of 100) and had satisfactory information technology literacy levels. Finally, Karamustafaoğlu et al. (2013) encouraged decision makers to enrich the teacher preparation program with additional topics that address scientific literacy. Based on the reviewed literature, researchers seem to have reached a consensus that pre-service teachers with low scientific literacy levels cannot be expected to grow scientifically literate individuals or to apply the science curriculum effectively.

Self-Efficacy

Based on the reviewed literature, researchers who conducted studies related to self-efficacy (Avery & Meyer, 2012; Aydin & Boz, 2010; Bayraktar, 2011; Bleicher & Lindgren, 2005; Bursal, 2008, 2012; Ebrahim, 2012; Kahraman, Yilmaz, Bayrak, & Gunes, 2014; McDonnough & Matkins, 2010; Murphy, Neil & Beggs, 2007; Onen & Kaygisiz, 2013; Tosun, 2000; Yılmaz & Cavas, 2008; Yilmaz-Tuzun, 2008) are in agreement with Bandura's (1977) definition of perceived self-efficacy as the belief "in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 2). Bandura (1986) differentiated between self-efficacy and outcome expectations in that "individuals can believe that a particular course of action will produce certain outcomes, but they do not act on that outcome belief because they question whether they can actually execute the necessary activities" (p. 392). For example, individuals are motivated to act if they believe the action will have a positive result (outcome expectation) and if they can perform that action successfully (self-efficacy).

Personal self-efficacy. Based on Bandura's (1977) theory, Ashton and Webb (1986) identified two types of teaching efficacy: personal teaching efficacy and outcome teaching efficacy. In this study, personal self-efficacy will be defined in line with Ashton and Webb's (1986) definition of personal teaching efficacy, in which personal self-efficacy refers to teachers' confidence in their experiences to develop strategies for overcoming obstacles to student learning.

Enochs and Riggs (1990) developed a research instrument based on Bandura's self-efficacy theory that stressed the critical importance of early detection of pre-service science teachers with low self-efficacy levels. Enochs and Riggs' (1990) contribution is the development of a valid and reliable instrument – the Science Teaching Efficacy Belief Instrument for pre-service teachers (STEBI-B) – which can be administered to measure personal self-efficacy levels of pre-service teachers. Many studies of personal self-efficacy (Aydin & Boz, 2010; Bayraktar, 2011; Bleicher & Lindgren, 2005; Bursal, 2008, 2012; Ebrahim, 2012; Kahraman et al., 2014; McDonnough & Matkins, 2010; Murphy et al., 2007; Onen & Kaygisiz, 2013; Tosun, 2000; Yılmaz & Cavas, 2008) have used the STEBI-B to measure the impact of certain variables on pre-service teachers' personal self-efficacy levels.

Several researchers have investigated the impact of science methods courses on pre-service teachers' personal self-efficacy levels (Avery & Meyer, 2012; Bayraktar, 2011; Bursal, 2008; Ebrahim, 2012). Some have reported that science methods courses have a positive impact on participants' personal self-efficacy beliefs, attributing their results to the pedagogical use of inquiry-based learning and authentic science teaching methods (Avery & Meyer, 2012; Ebrahim, 2012). However, others reported no effect on participants' personal self-efficacy beliefs, which, in regard to science, remain low (Bayraktar, 2011; Bursal, 2008). The researchers agreed that the participants' low self-efficacy toward teaching science results from their limited teaching experience, which should be incorporated into science methods courses.

A number of authors (Bleicher & Lindgren, 2005; Murphy et al., 2007; Tosun, 2000) investigated the relationship between science-related knowledge and pre-service teachers' personal self-efficacy beliefs. Bleicher and Lindgren (2005) found a positive relationship between participants' conceptual understanding of science and their self-efficacy beliefs about teaching and determined that more science courses were needed in teacher preparation programs to help future teachers maintain high levels of confidence in teaching science.

However, Murphy et al. (2007) and Tosun (2000) concluded that, although study participants had a good scientific background and high achievement levels in science, they still demonstrated a negative attitude toward teaching science. The researchers attributed their results to insufficient professional development and previous personal failures during the teacher preparation program.

Subject-specific self-efficacy. Similarly derived from Bandura's (1977) philosophy of self-efficacy, subject-specific self-efficacy refers to a teacher's judgment of his or her capabilities to effectively teach subject areas such as physics, chemistry, biology, and earth science (Yilmaz-Tuzun, 2008). Only Yilmaz-Tuzun (2008) addressed subject-specific self-efficacy levels among pre-service teachers in a study devoted to developing an instrument to measure pre-service elementary teachers' confidence levels with assessment techniques, classroom management, teaching methods, and Science Concept Knowledge (SCK). The SCK section is in line with this study's definition of subject-specific self-efficacy with regard to teaching science. Furthermore, Yilmaz-Tuzun (2008) concluded that pre-service elementary teachers "felt more confident teaching content in biology, earth science, or both than teaching content in physics, chemistry, or both" (p. 197).

In summary, the researchers in this paper were unable to locate a study that investigated the difference between pre-service elementary teachers' personal and subject-specific self-efficacy beliefs. Studies that addressed self-efficacy focused primarily on the personal aspect of self-efficacy, which is pre-service teachers' general self-efficacy towards teaching science. As a result, pre-service teachers were usually labeled as having high, medium, or low levels of self-efficacy towards teaching science without specifying (subject-specific self-efficacy) the exact science subjects they lack confidence to teach, such as biology, chemistry, and physics.

Methodology

Participants

Participants in this study were undergraduates in an elementary teacher education program known as the Teacher Education Program (TEP) at a mid-sized university in the Midwestern United States. Two groups from the TEP participated in this study. The first group was pre-service teachers enrolled in an introductory science methods course. These participants had just started the TEP and had not yet experienced major education and teaching methods courses. The second group was pre-service teachers enrolled in an advanced science methods course. These participants, however, had experienced major education and teaching methods courses.

Furthermore, the participants in this study responded to a demographic information survey, which included three parameters as shown in Table 1. 49 pre-service elementary teachers registered in two science methods courses participated in this study. This included 25 participants in the introductory science methods course (2 male and 23 female) and 24 participants in the advanced science methods course (2 male and 22 female). In addition, 53.1% of all participants reported having a good experience in science during high school. Also, 51.3% of them reported having a good current experience with science during teacher preparation at the university.

Table 1: Demographic Information

Category	N	%
Gender		
Male	4	8.2
Female	45	91.8
Science experience in high school		
Very poor	0	0
Poor	4	8.2
Acceptable	14	28.6
Good	26	53.1
Very good	5	10.1
Current Science experience		
Very poor	1	2
Poor	2	4.1
Acceptable	15	30.6
Good	26	53.1
Very good	5	10.2

Data Collection Instrument

This exploratory educational research study used a quantitative approach that employed quantitative data collection, analysis, and procedures. Participants in this study completed three instruments: Test of Basic Scientific Literacy (TBSL), Science Teaching Efficacy Belief Instrument (STEBI-B), and Beliefs About Teaching (BAT).

Created by Laugksch and Spargo (1996), the TBSL includes 110 items: the Nature of Science [NOS] (22 items), SCK (72 items), and the impact of science and technology on society [STS] (16 items). SCK covers four areas of test items: (a) earth science, (b) life science, (c) physical science, and (d) health science. The second instrument is the STEBI-B, developed by Enochs and Riggs (1990) to determine the personal self-efficacy beliefs of pre-service teachers toward teaching science. The STEBI-B includes two subscales, which are the Personal Science Teaching Efficacy Belief (PSTE) and Science Teaching Outcome Expectancy (STOE). Only the PSTE instrument was used because it is directly related to the study's topic. The third instrument is the BAT, developed by Yilmaz-Tuzun (2008) to determine the subject-specific self-efficacy beliefs of pre-service teachers.

Research Questions
1. How did the participants in the introductory and advanced science methods course perform on the TBSL?
   - 1a. How did the participants in the introductory science methods course perform on the six scales of TBSL?
   - 1b: How did the participants in the advanced science methods course perform on the six scales of TBSL?
2. What is the self-efficacy level among the four scales of the BAT in the introductory and advanced science methods course?
3. What is the difference between the level of personal and subject-specific self-efficacy among the pre-service elementary science teachers in both science methods courses?

4. What is the relationship between scientific literacy and subject-specific self-efficacy among the pre-service elementary teachers in both the introductory and advanced science methods course?

Results

Level of Scientific Literacy

Descriptive statistical analysis was used to determine the performance level of the pre-service teachers in the introductory and advanced science methods course. According to Laugksch and Spargo (1996), the satisfactory level (i.e. cut-off point) of the TBSL is expected to be 68 out of 110 items. The pre-service elementary teachers in both groups had a satisfactory level of scientific literacy. The pre-service teachers in the advanced course (M = 84.29, SD = 10.719) on average had a higher scientific literacy level compared with those in the introductory course (M = 76.24, SD = 13.772). It is important to note that six of the participants from the introductory and two from the advanced science methods courses did not achieve the satisfactory level of 68.

Level of Scientific Literacy across the Six Scales of TBSL

According to Laugksch and Spargo (1996), pre-service teachers are expected to obtain at least 13 out of 22 on the NOS subsection, 45 out of 72 on the SCK subsection, and 10 out of 16 on the STS subsection. The SCK includes earth, life, physical, and health sciences. Participants in the introductory and advanced science methods group achieved the scientific literacy expectation. The difference between the two groups' achievement across the six scales of TBSL are highlighted in Table 2.

Table 2: Levels of Scientific Literacy across the six Scales of TBSL

| | Science Methods Courses | | | |
| | Introductory (N= 25) | | Advanced (N=24) | |
Scale	Mean	SD	Mean	SD
Earth	9.80	1.803	10.92	1.932
Life	16.84	3.579	18.25	3.542
Physical	9.48	2.417	10.71	2.312
Health	15.24	3.632	16.96	1.574
NOS	14.56	2.740	14.88	2.833
STS	10.32	2.954	12.58	2.283
SCK	51.36	9.385	56.83	7.179

It can be seen from the data in Table 2 that the participants in the introductory science methods course achieved the scientific literacy expectation by scoring 14.56 out of 22 on the NOS subsection, 51.36 out of 72 on the SCK subsection, and 10.32 out of 16 on the STS subsection. The participants' teachers in the advanced science methods course also fulfilled the TBSL criteria, which is scoring 14.88 out of 22 on the NOS subsection, 56.83 out of 72 on the SCK subsection, and 12.58 out of 16 on the STS subsection.

Table 3 provides the percentage of correct answers for the two groups. What stands out in the table is that the highest percentage score for the introductory and advanced science methods course was on health science (80.21% and 89.26%, respectively). The lowest percentage

score for the introductory science methods course was on STS (64.5%) and NOS (67.63%) for the advanced science methods course.

Table 3: Percentage of Correct Answers

| Scale | Science Methods Courses | |
	Introductory (N= 25)	Advanced (N= 24)
Earth	65.33%	76.8%
Life	70.16%	76.04%
Physical	67.71%	76.5%
Health	80.21%	89.26%
NOS	66.18%	67.63%
STS	64.5%	78.62%

Self-Efficacy Level among the Four Scales of the BAT

Table 4 shows the descriptive statistics of the participants' responses in both science methods courses. What is interesting about the data in this table is that the introductory and advanced science methods course had the highest level of self-efficacy in biology (M= 4.1920, SD= .45270 and M= 4.35, SD= .624, respectively) and the lowest self-efficacy level in physics (M= 3.0914, SD= .71771 and M = 2.9464, SD =. 54409, respectively).

Table 4: Descriptive Statistics of the Participants' Responses on the BAT

| Scale | Science Methods Courses | | | |
| | Introductory (N= 25) | | Advanced (N=24) | |
	Mean	SD	Mean	SD
Physics	3.0914	.71771	2.9464	.54409
Chemistry	3.7867	.53472	3.5000	.46104
Biology	4.1920	.45270	4.3500	.62485
Earth	3.7360	.71349	3.7667	.62878

A one-way ANOVA was conducted to investigate the self-efficacy level of the participants in the four scales of the BAT. Table 5 indicates a statistically significant difference among the four scales of the BAT, F (15.531, 36.361) = 13.668, p =.000 for the introductory science methods courses. In addition, a statistically significant difference among the four scales for the advanced science methods course was present, F (24.499, 29.771) = 25.236, p = .000.

Table 5: One-way ANOVA test

Science Methods Courses	Score	Sum of Squares	df	Mean Square	F	p-value
Introductory	Between Groups	15.531	3	5.177	13.668	.000
	Within Groups	36.361	96	.379		
	Total	51.891	99			
Advanced	Between Groups	24.499	3	8.166	25.236	.000
	Within Groups	29.771	92	.324		
	Total	54.270	95			

*Significant at $p < .05$

In order to determine exactly where the differences were, the study included a Tukey post hoc test (Morgan, Leech, Gloeckner, & Barrett, 2007). For the introductory science methods course, the differences were significant between physics and chemistry, between physics and biology, and between physics and earth science. The differences were significant between physics and biology, between physics and earth science, and between chemistry and biology.

Comparing Personal and Subject-Specific Self-Efficacy
The researchers calculated an independent sample *t*-Test for the participants in the introductory and advanced science methods course to determine if there was a statistical difference between the participants' personal self-efficacy and subject-specific self-efficacy. It can be seen in Table 6 that there is no significant difference in the score for personal self-efficacy and subject-specific self-efficacy in the introductory science methods course. The participants had the same self-efficacy levels in both measurements of self-efficacy: STEBI-B (to measure personal self-efficacy) and BAT (to measure subject-specific self-efficacy). Regarding the participants in the advanced methods course, there was a significant difference in the score for personal self-efficacy and subject-specific self-efficacy t (-3.817) = 46, p = .000, d = -1.108. This indicates that the participants had different self-efficacy levels in both measurements of self-efficacy. Specifically, the participants held a high belief that they could teach science when they responded to the STEBI-B. However, the participants reported a lower level of belief that they could teach science when they responded to the BAT.

Table 6: Comparison of Personal and Subject-Specific Self-Efficacy

Science Methods Course	Self-efficacy Instrument	Mean (SD)	t	df	p-value
Introductory (N=25)	STEBI-B	3.63 (.492)	-.447	48	.657
	BAT	3.69 (.460)			
Advanced (N=24)	STEBI-B	4.11 (.507)	-3.817	46	.000
	BAT	3.58 (.447)			

*Significant at $p < .05$

Relationship between Scientific Literacy and Subject-Specific Self-Efficacy
The study computed correlation coefficients between the participants' scientific literacy levels and subject-specific self-efficacy levels. A Pearson product-moment correlation was calculated to investigate the strength of the relationship between the variables. Table 7 shows that only the advanced science methods course had an existing relationship between the two variables, r = .472, n = 24, p = .020.

Table 7: Pearson Correlation for Scientific Literacy and Subject-Specific Self-Efficacy

Science Methods Course	Pearson Correlation (*r* value)		
	Scientific Literacy	Subject-specific Self-efficacy	*p-value*
Introductory (Scientific Literacy)	1	.225	.279
Advanced (Scientific Literacy)	1	.472	.020*

*Significant at p < .05 (2-tailed)

Discussion

The results of this study show that the pre-service elementary teachers had satisfactory scientific literacy levels, which is calculated as 68 out of 110. Judging from the correct response rate of the mean score for the introductory and advanced science methods courses (M = 76.24, M = 84.291, respectively), the basic scientific literacy of pre-service elementary teachers is at a satisfactory level. This indicates that the TEP had a significant impact on the pre-service elementary teachers' knowledge in scientific literacy.

Comparing these results with results from other studies, the scientific literacy level of the participants in this study was higher than results from Cavas, P., Ozdem, Cavas, B., Cakiroglu and Ertepinar (2013) where the mean score for the pre-service teachers in their first year was 68.47 and in their fourth year 73.79. However, the results were slightly lower than Chin's (2005) findings when scientific literacy was investigated among science education majors and elementary education majors with a mean score of M = 107.47 and M = 99.11, respectively.

A possible explanation for these different results may be related to pre-service teachers' achievement level in science in high school, which can be drawn from the participants' response to the demographic question, "How would you describe your prior science experiences in high school?" Approximately 63.3% of the pre-service elementary teachers had a positive experience with science subjects. Chin (2005) stressed that "previous science-related experiences in school will have an influence on their scientific literacy" (p. 1568).

Furthermore, the researchers found interesting results regarding the achievement level of the pre-service elementary teachers on the six scales of scientific literacy. One of the unexpected findings is that health science had the highest correct response rate in both the introductory and advanced science methods courses (80.21% and 89.26%, respectively). A possible explanation for the participants' knowledge in "health" is due to their everyday life experience with health-related issues such as hand washing, tooth brushing, bathing, and dealing with a fever (Lee et al., 2008). In fact, Sonu and Amarjeet's (2007) study of high school students' health awareness showed that the majority of the participants had adequate knowledge about management of injuries, skin infections, and drowning. The study by Sobal, Klein, Graham, and Black (1988) of 831 high school students' health concerns offered another explanation for the participant's high achievement in health science: 92% of the students often thought about their health.

Furthermore, participants in the introductory science methods course had borderline scores in NOS, STS, and SCK (i.e. earth science, life science, physical science). These results are

likely to be related to the participants' experience in the TEP. They have not yet experienced major science and science education courses that will allow them to perform more positively on the TBSL.

The pre-service elementary teachers in the advanced methods course, however, are expected to have adequate correct response rates because they are a semester away from beginning their professional career as elementary teachers. They had sufficient knowledge in all of the scales except for the NOS subscale with a 67.63% correct response rate. Interestingly, researchers in previous studies reported that pre-service teachers did not acquire adequate conceptions of the NOS (Cavas et al., 2013; Chin, 2005). Lederman (1992) summarized the reasons for the low understanding of the NOS:

> (a) science teachers do not possess adequate conceptions of the NOS, irrespective of instrument used to assess understanding; (b) techniques to improve teachers' conceptions have met with some success when they have included either historical aspects of scientific knowledge or direct attention to the NOS; (c) academic background variables are not significantly related to teachers' conception of the NOS. (p. 345)

Therefore, it is reasonable to suggest that the domains of the NOS require particular emphasis in pre-service teacher education programs.

With respect to the level of subject-specific self-efficacy among pre-service teachers, very little in the literature was found regarding this topic. However, one interesting finding is that in both science methods courses the participants had the highest self-efficacy in teaching biology and the lowest self-efficacy in teaching physics. These results are in agreement with Yilmaz-Tuzun's (2008) findings that pre-service elementary teachers had a higher self-efficacy level in teaching biology and earth science concepts than physics and chemistry concepts.

A possible explanation for the low self-efficacy in teaching physics and the high self-efficacy in teaching biology is the nature of this subject. Unlike biology, the main challenge of teaching physics concepts at the elementary level is the abstract nature of this knowledge. Elementary students are required to develop mental images of a complex subject that they have never observed first hand. This raises a challenge for teachers to find out how to present and explain such fundamental and abstract concepts such as circuits, conductors, insulators, series circuits, among others, which are essential to a basic understanding of physics concepts at the elementary level (Azaiza, Bar, & Galili, 2006). This explanation is in agreement with data obtained from the BAT, specifically the participants' response to the following question: "I believe that I am able to teach thoroughly the following concept: electrical energy." Only 20.8% of the pre-service elementary teachers "agreed" with this statement, and none of them picked the "strongly agree" response. This means that the TEP needs to empower pre-service elementary teachers with teaching strategies and methods that can help them overcome their low confidence level in teaching physics topics.

With respect to self-efficacy, many studies focused on pre-service teachers' self-efficacy in teaching science have applied the STEBI-B as a main indicator of pre-service teachers' self-efficacy levels. Researchers made major decisions and conclusions based on its results. One question that needs to be asked, however, is whether using the STEBI-B as a primary

measurement is enough to adequately measure pre-service elementary teachers' self-efficacy levels?

In the current study, the results of the introductory science methods course indicated no significant difference between the participant's personal and subject-specific self-efficacy. This means that on both instruments that measured self-efficacy – STEBI-B for personal self-efficacy and BAT for subject-specific self-efficacy – the participants had the same moderate level of self-efficacy in teaching science. This implies that both instruments were able to measure the overall self-efficacy levels of the participants. A possible explanation for this might be that pre-service elementary teachers who have just begun the TEP have not had the opportunity to develop self-efficacy beliefs in teaching science.

What is surprising, however, were the results of the participants in the advanced science methods course. The results showed a significant difference between the participants' personal and subject-specific self-efficacy. A note of caution is due here when explaining the results, since the current study relied on quantitative data. However, a possible explanation is that the participants in the advanced course had experienced a significant number of science methods courses, science content courses, school observations, and field trips that allowed them to re-evaluate their confidence in teaching specific science concepts (i.e. physics, chemistry, biology, and earth science). By examining the BAT instrument, it can be seen that the instrument allows pre-service elementary teachers to document their challenges towards teaching specific science topics. Regarding the high self-efficacy levels reported by the participants in the STEBI-B, this may be due to the participants responding to the questions with a positive self-efficacy level in a certain science subject. For example, a participant may have a high self-efficacy level in teaching biology and earth science concepts and a low self-efficacy level in teaching physics and chemistry. Therefore, this participant may respond to the STEBI-B in either a positive or a negative way. These findings may help future researchers find new ways to address the level of self-efficacy among pre-service teachers that do not depend on one instrument to draw conclusions about self-efficacy.

Furthermore, the results of the Pearson product–moment correlation revealed a moderately positive relationship between scientific literacy and subject-specific self-efficacy among the participants in the advanced science methods course. The score on the Pearson product–moment correlation indicated that the pre-service elementary teachers with higher levels of scientific literacy had high subject-specific self-efficacy levels in teaching science, and the pre-service elementary teachers with low levels of scientific literacy had low levels of subject-specific self-efficacy.

To date, no study has been found that studied the relationship between scientific literacy and self-efficacy among pre-service teachers. However, if self-efficacy is considered a dimension of attitude, then these current results agree with the findings of other prior studies of scientific literacy and attitudes toward science. Cavas, P., Ozdem, Cavas, B., Cakiroglu and Ertepinar (2013) and Chin (2005) came to similar results when they examined the relationship between scientific literacy and attitudes toward science. They found that the pre-service teachers had a positive correlation among the participants in their study.

In future research, a mixed methods design is an appropriate approach. This approach will provide qualitative interpretations, such as providing reasons why participants exhibit certain scientific literacy and self-efficacy levels (e.g. high levels, low levels, or satisfactory levels).

In addition, this study could be expanded to other teacher preparation programs that prepare students to teach at the secondary level.

Conclusion

Pre-service teachers' scientific levels and self-efficacy in teaching science could have an effect on how pre-service teachers teach science. The teacher remains the most important element in providing high-quality and effective science education to the average student (Shamos, 1995). It is critical for pre-service elementary teachers to have high levels of scientific literacy and confidence in teaching science; therefore, universities are encouraged to help their students gain abilities and knowledge that will help them achieve this goal (Avery & Meyer, 2012; Bacanak & Gokdere, 2009).

The findings of this study have implications for teacher preparation programs. Specifically, pre-service elementary teachers at the end of the program (i.e. advanced pre-service teachers) should make sure that they are adequately prepared for the teaching profession. The findings of this study indicate that advanced pre-service elementary teachers have satisfactory scientific literacy levels. However, the evidence from this study suggests that an emphasis on the NOS domain is required in pre-service teaching education programs. In addition, the findings of this study indicate that advanced pre-service elementary teachers have low self-efficacy levels in teaching physics. Therefore, decision makers in TEP are encouraged to provide pre-service teachers with knowledge and skills on how to teach students the abstract concepts in physics. The finding also revealed a positive relationship between scientific literacy and self-efficacy among advanced pre-service elementary teachers. Therefore, curriculum designers in the TEP are encouraged to stress the dimension of scientific literacy in the curriculum, which may have a positive result on the pre-service teachers' confidence levels.

The findings of this study have implications for science education research. The current data highlight the importance of distinguishing between personal and subject-specific self-efficacy towards teaching science. The results of this study showed that there is a statistically significant difference between subject-specific self-efficacy (measured by the BAT) and personal self-efficacy (STEBI-B) among this sample of advanced pre-service teachers. Therefore, future research in self-efficacy is encouraged to consider the type of instrument used to measure pre-service teacher self-efficacy levels.

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Ruptured Dreams: Female Students' Talk About Boys as Past "Lovers"

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Abstract

When romantic encounters come to an end they often evoke a plethora of feelings associated with "breaking up". This article explores this issue in relation to a number of adolescent girls' views on this topic which emerged during focus group discussions about Eminem's song *Foolish Pride*. The lyrics of this song convey resentment towards an ex-girlfriend and accentuate racial elements which, in the words of the song, could be summed up as "Never date a Black girl because Blacks only want your money". Data were collected in two school settings, involving female students of different nationalities, in order to discover students' reactions to the provocative lyrics that demonstrate how meanings that surround the end of a romantic relationship are shaped and produced within the intersectionality of gender and race. A diffractive model of analysis is adopted to explore the girls' concerns with the misogynistic tone underlying this rap song. The girls' opposition to boys emerges as a central theme. Underlying this resistance however there was also an affirmation of heteronormative femininity. The girls' perspectives suggest that although students do not passively absorb racialised and heterosexualised constructions of gender, their apprehension of messages mediated through popular media could affirm the gender divide. It could also reinforce estrangements between teenage boys and girls that the media promotes.

Keywords: adolescent romantic relationships, adolescent friendships, race, gender, diffractive analysis, Eminem

Introduction

Adolescents think frequently about romantic relationships and intimate attachments. These constitute a major topic of conversation for them, in particular among friendship groups of adolescent girls at school (Kehily, 2002). Female adolescent students share gossip about boys within school subcultures, which are exclusively for girls (Cassar, 2014) and their eagerness to talk about romance, sexual attraction and dating demonstrates the central importance girls attach to these topics (Cassar, 2015). In addition, adolescent romantic relationships, friendships or hook ups are often short-lived and "transitional" (Galliher, Welsh, Rostosky & Kawaguchi, 2004, p.204). The experiences of breaking up therefore resonate with a considerable number of adolescents. For young adolescent girls, the end of their romantic relationship has been associated with negative feelings brought about by worry, disappointment and sense of rejection and betrayal (Richards, Crowe, Larson & Swarr, 1998). Although considered trivial flings, romantic relations might be "central in adolescents' lives" (Furman, 2002, p.177), since they occupy their thoughts to a considerable extent. Adolescent romantic encounters constitute a contested site of gendered dynamics especially in normative, heterosexual relations.

This article explores schoolgirls' talk about Eminem's rap song *Foolish Pride* (FP), as it occurred during focus group discussions. The study draws on field research conducted in two secondary schools with female students in Malta. The article's focus is on the emphasis placed by the girls on the racialised power dynamics between Eminem and his ex-girlfriend. The study aims to explore female students' reactions to the provocative lyrics of the song *Foolish Pride* with regards to its portrayal of a breakup. The inquiry focuses on meanings surrounding the end of a romantic relationship shaped and produced within the intersectionality of gender and race as they emerged from the girls' discussions. The theme of FP, concerning the aftermath of a break-up, was regarded relevant to the purpose of the study. The criteria for choosing the song was based on the content of the lyrics, which demonstrates how meanings surrounding the ending of a romantic relationship are shaped and produced within heterosexualised notions of gender and race. Students' explorations of Eminem's song FP could contribute to an understanding of teen friendships and romantic relationships and throw light on female students' conceptualisations about boys and romantic partners. The findings provide possibilities for understanding teenage girls' perspectives of the lived relations of power between girls and boys in the context of 'breaking up' a romantic relationship. The study does not present a content analysis of FP nor a critique of Eminem as an artist.

Rap is not considered only a genre of music, but also as comprising an intricate system of concepts, beliefs, values and ideologies (Taylor & Taylor, 2005), which could be passed on to listeners. A body of research documents the influence of music on adolescents' views on gender and sexuality (Aubrey, Hopper, & Mbure, 2011; Beentjes & Konig, 2013; Cobb & Boettcher, 2007). More frequent viewing of music videos by adolescents is associated with adopting more stereotypical and traditional gender roles (Ward, Hansbrough & Walker, 2005). Time spent watching music videos by adolescents has also been found to be related to their perceptions on gendered, traditional attitudes such as men dominate sexual relationships and women are sex objects (Beentjes & Konig, 2013). It is possible that music videos shape the formation of sexual attitudes based on gender stereotypes and reinforce them (Beentjes & Konig,). Taking this empirical evidence into consideration, the current study aimed at discovering students' reactions to the provocative lyrics of FP, which repetitively blame and accuse the ex-girlfriend in an aggressive tone. Rap and hip hop songs could evoke powerful

sentiments and provide a means of introspection. Female adolescents are more likely than male adolescents to reflect on their emotions through music, particularly when feeling lonely or 'down' (Roberts & Christensen, 2001).

The Funky Eminem
Eminem is one of the highest-selling musicians and one of the most popular rap artists. Eminem "is the celebrated anti-hero of mainstream youth culture who has attained the increasingly 'postmortem' American Dream" (Halnon, 2005, p. 442). He is considered a controversial artist because of the dark, vulgar and chilling lyrics of his songs which present harsh realities of violence and anger in ways which affirm misogyny and degradation of women. Misogynist and sexist language in rap/hip hop pervade this genre of music (Adams & Fuller, 2006; Conrad, Dixon & Zhang, 2009; Enck & McDaniel, 2012; Weitzer & Kubrin, 2009). Eminem's misogynistic lyrics could be intended as a means for him to gain acceptance, popularity and credibility as a rapper (Stephens, 2005). Racist messages in his songs are mistakenly understood as a form of "advice" and are regarded as an integral part of his public persona, despite the fact that his status and popularity as a white rapper emerged from a predominantly black genre. Over the past three decades, some aspects of hip hop/rap music could have formed part of a wider cultural resistance against feminism and provided a means to interrupt developments in favour of gender equality and reinforce male domination (Weitzer & Kubrin, 2009). Nevertheless, the graphic and sexually explicit derogatory presentations of women through rap lyrics of Eminem's and other artists' songs have been strongly criticised numerous times for justifying the victimisation, objectification and exploitation of women (Weitzer & Kubrin, 2009). Women are more inclined than men to reject demeaning, misogynistic rap lyrics, which reinforce negative attitudes about women (Cobb & Boettcher, 2007).

Eminem's personal problems and afflictions are the subject matter of lyrics underlying a number of his songs. His "unbridled hostility toward all women", as presented in a number of his songs, mentions his relatives. This has been considered "extreme" but not unique to Eminem in the scene of rap music (Weitzer & Kubrin, 2009, p. 12). FP is one of Eminem's earliest songs, released in 1998. The lyrics convey strong resentments towards a black ex-girlfriend, described as 'Brutus' and 'big whore'. Black girls are compared with white girls and described as 'dumb chicks' and 'bitches'. The following excerpts of the lyrics indicate that these degrading and insolent words are directed towards *all* black young girls in an essentialising manner:

... Blacks and whites they sometimes mix
But Black girls only want your money cause they're dumb chicks
So I'ma say like this
Don't date a Black girl

... Black girls and white girls just don't mix
Because Black girls are dumb and white girls are good chicks
... I like white girls all over the world
White girls are fine and they blow my mind
And that's why I'm here now telling you this rhyme
'Cause Black girls, I really don't like

I'm giving you a little advice
Don't date a Black girl, if you do it once you won't do it twice

You won't ever do it again because they'll take your money

I'll get straight to the point Black girls are bitches

And then you turn around and fuck another big, Black guy
Now that's pretty wrong, but you're just ganking
But that's okay because you need a goddamn spanking
From me, the funky Eminem

Alleged spousal abuse by Eminem of his (white) ex-wife Kim Mathers (Enck & McDaniel, 2012) shows that ill feelings towards an ex-lover arise irrespective of race. In 2004 Eminem released the song *Yellow Brick Road,* whose lyrics recounts that he wanted to go out with a black girl in order to 'become more popular' and "piss off" Kim. The lyrics of *Yellow Brick Road* mention that this black girl was the same one, whom he mentions in FP. An apology for the racist lyrics in FP is put forward in *Yellow Brick Road,* despite its message that FP was not "that bad" as a song:

The bombest goddamn girl in our whole school
If I could pull her, not only would I become more popular
But I would be able to piss Kim off at the same time
But it backfired, I was supposed to dump her
But she dumped me for this black guy
And that's the last I ever seen or heard
Or spoke to the 'Oh Foolish Pride' girl
But I've heard people say they heard the tape
And it ain't that bad – but it was, I singled out a whole race
And for that I apologize, I was wrong
'Cause no matter what color a girl is, she's still a ho

FP remained a topic of contention and, on numerous occasions, Eminem was confronted about the disrespect he showed towards black women. When interviewed, he responded: ''I'd just broken up with my girlfriend, who was African American, and I reacted like the angry, stupid kid I was. I hope people will take it for the foolishness that it was, not for what somebody is trying to make it into today" (cited in Dawkins, 2010, p. 479).

The Study

The data emanated from focus groups discussions conducted in two state schools in Malta (School A and B). Focus groups allow for the sharing and exploration of collective and individual experiences. A group setting provides the opportunity for informants to observe, interact and comment on their peers' perspectives and beliefs and engage with possible similarities and differences. At the time of the data collection both schools had only female students. The majority of students of both schools were Maltese and predominantly of working class background. The informants were fifteen years old. Both groups were therefore homogeneous in terms of age, social class and gender. The majority of students of school B lived in a small town, renowned for being a red-light district. Migrant students attended both schools. Those contributing to the study arrived from Belgium, China and the Philippines. Compared with other state schools in Malta, the two schools chosen for the study had a relatively high number of migrant students. Migration flows to Malta have been increasing at a steadfast rate from 2002, especially since 2004, when Malta joined the European Union.

After the schools were approached and the research objectives discussed, permission to conduct the research was granted by the *Directorate for Quality and Standards in Education* and heads of schools, who also acted as gatekeepers for the recruitment of the informants. Parental and individual consent was sought and granted. In both schools, the informants belonged to the same class and therefore they already knew each other and held a group identity. The data were collected between February and May of 2010[1]. One focus group session was held in each school and each lasted about one hour. The discussion was conducted in Maltese and the researchers translated simultaneously into English in order for the migrant students to understand. Nine and eleven students from School A and School B respectively participated in the study. Apart from the Maltese informants, there was one migrant student who was Chinese (School A). Two Belgian informants and one from the Philippines took part in the other focus group (School B). The informants listened to FP through a photo montage on video showing English subtitles of the song's lyrics. The photographs showing Eminem were chosen by the researchers. Observation notes taken after the research sessions were also included in the data analysis.

Focus group material was transcribed and thematic analysis was employed according to the process outlined by Braun and Clarke (2008). This consisted of an initial familiarisation with the data followed by the identification of codes that were employed to set up the formation of themes. Repeated themes within the data formed the basis of the reporting of findings and the analysis. The data was further reviewed in order give an account of the patterns of meanings derived from the informants' discussions that were relevant to the research questions. Pseudonyms, accompanying direct quotations have not been used, since through the audio recordings it was difficult to decipher who was speaking. There were also numerous instances when the students talked at the same time.

Ethical Concerns
Ethical measures concerning respect, care and confidentiality were taken into consideration throughout the data collection procedure. The use of the lyrics of FP among the teenage informants raised a number of ethical issues, due to the aggressive tone and bizarre content of the song. There are a number of ethical implications which need to be taken in consideration when deciding whether to present racist, misogynistic and offensive material for data collection purposes. These revolve around the concern that the dissemination of this material could have been harmful and disturbing to students. The song could have further reinforced the negative messages it conveyed and accentuated the male-female divide. Another concern was about the possibility of students feeling incited to compete with the messages of hate the song contains. On the other hand, the option of not utilising this content could have enabled a sense of alienation from the music cultures that surround young people. The decision to refrain from using FP could have perpetuated the silences that surround these sensitive topics. It was decided that the lyrics merited discussion, because students could potentially benefit from a critical exploration of issues related to the aftermath of romantic relationships. The class teachers who granted permission for focus groups to occur during their *Personal and Social Developmen*t lessons were provided with the video clip and focus group discussion questions before the sessions were conducted to ensure understanding of the research study.

Another pertinent ethical issue that was considered by the researchers was that students may disclose they had previously been victimised by their dating partner or that, during the data collection phase, they experienced intimate partner verbal aggression or some other form of abuse. These situations required immediate care for these students, who needed professional help. The questions were framed in a way which hypothetically asked them what they would have done if they were in the situation described in FP. Although some of the participants talked about their ex-boyfriends, none of them disclosed that they had experienced direct or indirect involvement with intimate partner abuse. Ethical clearance was obtained from the University of Malta Research Ethics Committee.

Diffractive Methodology

The study is situated within a posthumanist theoretical framework, with particular emphasis on 'diffraction' (Barad, 2007, 2014). In classical physics, diffraction refers to the bending of light as it goes around the edge of an object. Barad explains that etymologically 'diffraction' derives from a word which signifies "break in pieces" and "shatter" (Barad, 2014, p. 184). I draw on this thinking to derive possible understandings of how the girls attempted to contest the arrogant tone of the song in relation to situations revolving around 'shattered' dreams associated with the ending of romantic relationships. A diffractive methodology (Van Der Tuin, 2014) is employed to inquire about the interplay between the girls' knowing and their lack of knowledge about how to deal with boys and breaking up. Knowing and not knowing overlap each other as diffractive waves do. Barad's works (2007, 2014) inform the analysis through a study of the girls' entanglement with conceptualizations of the masculine other and to different meanings surrounding masculinities. I use this analytical approach to explore gender norms that intersect with race. The analysis seeks to avoid generalisations based on gender stereotypes which regard the positioning of boys and girls in romantic relationships to be necessarily one of domination and subordination respectively. The analysis attempts to give possible interpretations of what the informants could have intended through a diffractive methodology that "is respectful of the entanglement of ideas and other materials..." (Barad, 2007, p. 29).

Meaning and matter occur simultaneously (Barad, 2007). From this perspective the girls' frayed, shabby and old-fashioned sweaters of their masculine-looking school uniform and their attempts to feminise their look by rolling up their skirts from the waist to perform "the teenager in the mini skirt" form part of the data. So do their eyes demarcated with eye liner, their loud voices and glaring eyes. Other data which accompanied the girls' words emerged from instances such as when one of the teachers kept coming in and out of the classroom during the focus group discussion presumably to check on the students' behaviour and looking at us suspiciously and finding students "unruly". Data which is not made up of mere words holds knowledge and contributes to insights on how to read masculinity from a lens of femininity. This approach however, does not diminish the power of the girls' articulations.

Findings

In the introduction to the video clip it was explained to students what the song was about. Caution was taken so that their opinions about the lyrics would not be shaped by how the subject matter of the song was introduced. Nevertheless, at the start of the discussion the song was described as "controversial" by the researchers. When the name of the song was mentioned, the girls unanimously said that they didn't like Eminem. After this spontaneous reaction, they listened to the song, followed the images attentively and participated actively in the discussion. Interaction amongst participants was encouraged as focus groups were

employed with this aim. In order to discern a group viewpoint attempts were made to ensure that all the participants expressed their views by directing questions to those who were holding back.

The findings from both schools show that students agreed that the contents of the song were racist and that the message embedded in it was sexist, negative and repulsive. They assumed that the lyrics referred to an episode which had actually happened to Eminem in real life and that the message of the song corresponds to what he felt and thought about the situation. A number of girls were dismayed and even shocked by his attitude and by the way he was exposing his ex-girlfriend. Spreading rumours in that way was considered unacceptable: "I don't know how they allowed him (Eminem) to record this song" (School A). The possible motives behind the song were questioned. Eminem's preference for white girls built on the assumption that "White girls are good; I like white girls" was considered flawed. The students were unsure of the validity of the accusations outlined in the lyrics against the "ex-girlfriend". For example, students of School A reasoned that perhaps she was not after money, implying that there were lies behind the "story". Students of both focus groups said that skin colour alone does not determine one's conduct and that blaming all black girls was senseless. They reasoned that in general Eminem's message was "wrong" and that he overreacted. Although none of the students justified the racist lyrics, one girl from school B deflected the criticism towards Eminem by arguing that "You don't know what he was feeling when he was saying bad things". Despite this comment, negative representations about Eminem were put firmly in place during the discussions and the girls hardly contested or negotiated this position. Students from school A in general said that if they were Eminem's black ex-girlfriend they would take action following the release of the song. Their answers ranged from: "I would punch him in the mouth", "speak to him about it", "report him (to the police) on grounds of racism" and "would react violently".

Most of the girls made it clear that they had nothing against black persons. A few girls, however, claimed that they were afraid of "Arab men", because they chased them in the streets. Students of School B mentioned "terrifying" episodes when "Arab men" also followed their female friends and relatives. Fear of black men was caused by "the way they look" (School A). With regards to choosing a romantic lover who was black, different views were held. A number of girls from School A stated that having a lover with dark (not black) skin was considered fine and even an asset, but some of them were against the idea of going out on dates with a person with "black skin". Whereas the character of the person and how one treats one's lovers were regarded more important aspects to consider, some of the girls of School A stated that they would feel uncomfortable having a relationship with a black person because their family members and other people would disapprove. The protection of their reputation was perceived as being at stake. The counter arguments brought forward by other students of the same school were that even "white guys might do wrong things" and that one should not be influenced about what other people might think and say. The idea was put forward that if one were to know black people, perhaps skin colour would not make a difference when it came to dating. They repeated that one should not generalise and assume that all black men or all white men are the same.

The majority of girls of both schools positioned themselves in opposition to boys, according to their perceptions about masculinities. Most of the girls expressed considerable resistance towards boys. They articulated an othering attitude towards them by expressing their disgust "at having to deal with them" (School B). A sense of antagonism and hostility towards boys arose during their discussions, which were devoid of positive representations of boys. A few

girls said that it's easier to make friends with girls than with boys, because "boys pretend to be grown up and they are cruel" (School B). A number of statements indicate that some girls had internalized notions of gender stereotypes: "Em boys em always try to em make fights and girls mm they try to make friends" (International student, School B). One of the criticisms against boys was that they pestered them relentlessly. Underlying some of the students' statements, there was a sense of rivalry against boys: "I can wear heels and look taller than my boyfriend" (School B).

Not all the girls had experienced a romantic relationship. One of the international students from School B said that her only friends in Malta were her schoolmates and that she had no male friends in Malta. In some instances, talking about ex-boyfriends created a painful site, arising from bad memories about past relationships. Underlying the girls' statements, there was a sense of relief that the relationship was over. Talk about missing their past boyfriend was absent. Some girls made it clear that they did not accept verbal aggression: "I had an ex and before I broke up with him he was offensive and saying bad things about my mother and I started being offensive with regards to his grandmother" (School B). Ending the relationship was not described as difficult by a number of girls: "I had one (a boyfriend) and we broke up and all the time he was saying bad things to me. I got fed up of him and told him to get lost" (School B). In general, strong words were used to describe how they dealt with ex boyfriends: "Men are a pain... because they are pests. An ex-boyfriend he sent me a letter . . . to go back and I told him I was single but that I didn't want to be his girlfriend, because all the time he pestered me" (School B). The majority however argued that in some cases one could end the relationship in an amicable way and still remain on good, friendly terms with an ex-boyfriend, "even if this is difficult one should try" (International student, School A). Others were adamant that it is not possible to remain friends. At the end of the discussion the students were asked to write their general feedback about the session. The comments were all positive and indicated that they enjoyed the discussion. For the majority, watching the video clip was their favourite part.

Discussion

The opening lyrics of Eminem's song declare that "Foolish Pride has a lot of things to say". Even the girls of the study had their say and counteracted the message of the lyrics with an aggressive tone by challenging discourses of heterosexualised aggression which works to make white girls compete with black girls. Students of both schools generally showed disgust when confronted with the lyrics of FP, in terms of its sexist, racist and misogynist content. The majority held a clear notion of what racism entails and how destructive it is. In this regard, these students showed that they do not passively absorb messages mediated through popular media and that they possess the ability to critique and resist them. The findings however also indicated that racist ideas permeated the thinking of a number of girls. A contradiction surfaced, indicating that whereas in general the students criticised the racist attitude towards Eminem's ex-girlfriend, as depicted in FP, a few of them exhibited xenophobic sentiments. The approval of romantic partners by family members was considered paramount, even if it reinforced racist views and systems. This indicates that some girls might have internalised attitudes, which constitute black people as "others". In a number of cultures, there has been a decline in outward resistance to white female - black male relations in recent years, but it has been taken over by "a more subtle form of resistance accomplished through surveillance and regulation of White female and Black male bodies and the spaces in which these bodies interact" (Irby, 2014, p. 786). According to the informants there were indicative attempts by a number of parents to distance them from black

male bodies. The parents justified their reasoning by positioning their daughters in need of bodily safety and protection from the "Arab other". The intersectionality of race and gender reveal the complex nature of girls' conceptualisations of their interactions with boys. Race is positioned alongside socio-cultural influences that link with personal emotions, gender, time and space.

There might have been a myriad of ways through which the girls could have experienced friendships and romantic relationships with boys. The personal and social environment of the Maltese and migrant students, embedded within cultural aspects of their home and host country and other countries they might have lived in, could have formed their understanding of boys. Being white or otherwise encompasses a diverse and wide range of cultures, due to the dynamic nature of ethnicity (Nayak, 2001). The girls' social backgrounds could have contributed to the process of shaping their conceptualisations of race and gender in varying degrees. The data indicates that gendered heteronormative discourses permeate the understanding of girls' conceptualisations on teenage dating. At its core, the girls' talk was embedded within anti-boy discourses, which revolve around dominant and established norms of gender binaries. Notions of adolescent boys' masculinities described as "strong, active, hard, rational" Kehily (2001, p. 117) were however also put to the test and subjected to scrutiny by the informants. The apparent discord, conflict and unease that was conveyed might have concealed other hidden realities. For example, the girls' expressions of resistance occurring in a group context could have served as means to regulate each other's conceptualisations of boys. Research on how girls regulate each other's femininity through their dynamics in friendship groups suggests that they are often driven towards the containment of other girls by policing each other's sexual behaviour, by defining the parameters of romantic relationships and friendships and by dictating the attributes of physical appearance (Brown, 2003; Kehily, 2002).

The designation of boys as the ones who "make fights" juxtaposed against "girls make friends" conveys accusations which could have resulted from experiences of betrayal, anguish and pain. In general, the boys mentioned did not seem to have lived up to the informants' expectations. Consequently, the girls might have learnt that they are to maintain boundaries with males especially "black males". The past recollections of bad memories with boys seemed to have remained alive and imprinted in their minds, as often happens:

> Memory is not a record of a fixed past that can ever be fully or simply erased, written over, or recovered (that is, taken away or taken back into one's possession, as if it were a thing that can be owned). And remembering is not a replay of a string of moments, but an enlivening and recon figuring of past and future that is larger than any individual. Remembering and re-cognizing do not take care of or satisfy, or in any other way reduce one's responsibilities (Barad, 2007, ix, parenthesis in original).

Past memories cause "diffractions" and dictate present and future circumstances. Emotional barriers by girls towards boys could work to maintain the hegemony of gendered subjectivities and interfere with their future relationships with them. Past experiences form entanglements with future possibilities. In positioning themselves against the male other through negative portrayals of masculinity, the girls could have reinforced their own constituted defence mechanisms. This perspective regards the girls' verbal expressions as counterattacks against designated positions of subordination that they might have felt caught

in. Their performance of an aggressive self could be read as a cry for help and as a way to demand respect. The ways they "othered" boys could be considered "epistemically violent in reproducing power relations of superiority and inferiority" (Phoenix, 2009, p. 101). Their use of voice could have echoed internalised cultural anxieties, possibly brought about by the media's oversexualising and objectification of girls. Verbal aggression could become the means through which the girls (and Eminem) enacted and performed their gendered identities to replicate and perhaps contest uneven social processes. As teen girls negotiate contemporary discourses of sexual aggression and competition (Ringrose, 2008), the parameters surrounding the nurturing and accommodating qualities of females, which revolve around standards that girls are expected to reach, become blurred and less defined. Aggressive words articulated by girls are in discord with feminine "good girl" qualities, associated with being nice, quiet, caring, passive, cautious, docile and modest. Feelings arising from fear, anguish, insecurity and lack of self-esteem associated with sexual attraction and dating have been found to dominate a number of Maltese adolescent girls (Cassar, 2013).

The students' attempts at making meaning of masculinities did not seem to be linear but rather fragmented and repeatedly torn apart as they engaged in the discussion of different situations, alternating between experiences related to subordination and retaliation. Nevertheless, the girls attempted to unpack, rupture and even "shatter" sexist discourses by resisting hegemonic and aggressive masculinities which work to instil submissive behaviours around girlhood. Through the lyrics of FP they could have sensed the dominance of patriarchy, accentuated through the international celebrity status of Eminem. The existing boundaries they described between boys and themselves seemed to draw them together through the sharing of their understandings about their conceptualisations of boys. These boundaries "diffracted" and seemed to shift as a result of fluid power practices which were easily destabilised by moods, expectations, pressures, conflict and revenge. In some instances, the girls' critique of the lyrics of FP replicated the same aggressive tone of the song. These findings demonstrate the struggles that operate in relationships and how estrangement and accusations easily arise in adolescent friendships between boys and girls. The fragility of such relations is accentuated through the avoidance of direct communication in person. The girls' articulations suggest that they tried to defend themselves from emotional hurt by shutting down communication with boys in order, perhaps, not to trigger confusion and feelings associated with being humiliated. A diffractive analysis of these findings points towards the recognition that the girls might have wanted to assert themselves and establish some form of power through their use of aggressive verbal expressions by "attending to and responding to the details and specificities of relations of difference and how they matter" (Barad, 2007, p.71). In so doing they could have rejected opportunities to befriend caring, decent boys. Acts of protecting themselves from being bullied by boys could have required them to forgo relations. Expressions about the girls' desires for meaningful connections with boys through friendship or romantic encounters were largely absent. A sense of enthusiasm, desire, curiosity and interest in relation to forming relationships with boys was also felt to be missing. The single life was generally described as a privilege and the girls' articulations about it contrast with the dominant discourse of "wanting a man". This suggests a rupture in their desire for connecting with boys. Rather than trying to make sense of their relationships with boys, both Maltese and migrant students seemed to have enacted a defence mechanism or "obstacle" to protect their personal territory from them. Their explanations about how to handle boys seemed to be based on assumptions that portray men as pests. This perspective could lead to the suppression of sexual feelings. Although othering boys could empower the positioning of girls in the dating scene, it could also stifle their desires. The implications of distancing themselves from boys suggest that the girls did not comply with social scripts of

heterosexual femininity that dictated the importance of having a boyfriend. Living in a village where men come seeking the services of prostitutes could have mediated their understanding of what it means to be romantically coupled. The othering of boys could have stemmed from their refusal to be reduced to an object of sexual desire. Their resistance towards boys could have acted as a form of protection to ward off any attempts by men to objectify them for sexual pleasure. Their articulated preference for remaining "single" at that particular time in their life could have been the result of their perceived dangers surrounding prostitution. Adolescent girls are more concerned than boys with protecting their sexual reputation (Allen, 2004, p.162). This however contrasted with the mini skirt look. Research which employed a discursive-new materialist approach examined how short skirts act as "a powerful non-human material agent" (Ringrose & Rawlings, 2015, p.92) in the making of "girls" in a school environment and "produced them as *too* sexy in the wrong ways" (p.103, emphasis in original).

The negative overtone of FP could have influenced the students' disposition in how they chose to answer the researchers' questions. Their responses could have also resulted from the group dynamics during the data collection. A focus group setting might have hindered some of the girls from expressing dissent or differing opinions from their peers, who mainly talked about boys in negative terms. Although questions were also asked directly to those girls who were providing the least response, a number of girls in both groups dominated the discussion and these expressed their need to disengage themselves from occupying spaces within romantic relationships. The fact that the school settings were not constructed on a co-education model might also have contributed to the girls' sense of estrangement from boys which was evident in their responses. No significant differences were found in the findings of the discussions held in both schools. The informants represented a range of similar social and cultural perspectives and positions in relation to the research agenda. The discussions were embedded within a strictly heterosexual context and marked by an invisibility of references to lesbian, bisexual, transgendered and queer relationships. The students followed the conventional, heteronormative path and gender nonconformity was not mentioned. The power dynamics occurring between boys and girls described in both groups in general positioned boys as losers and girls as not being accommodating of bad treatment by them. Fear of being dominated by males seems to have consumed some of the girls and prompted them to cultivate a defensive relationship with boys.

Conclusion

A posthumanist lens views girls' claims and perceptions on masculinities as possibly being transitional. Their inclination to resist conformity and compliance with the stereotypical dictates of girlhood could be temporary. The process of disentanglement from situations that make girls subservient in heterosexual romantic relationships does not entail a one-time intervention. For some girls it is an ongoing struggle. Insights derived from the notion of diffraction (Barad, 2007, 2014) position heartbreak and disappointments in break-ups as "obstacles" which could potentially lead students to better understand the causes of interpersonal aggression that ensue in some cases and how it could be resisted by critically reflecting on the possible causes that enable it. Disappointments caused by ruptured dreams in relation to teenage romantic relationships could make it possible for new circumstances to emerge. This means that relationality could be productive if reworked. Unpacking these "diffractions" is pertinent to understanding how girls respond and cope with racialised and intensified criticisms hurled at them through a number of rap and hip hop songs.

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An Examination of Listening Acquisition: A Study of Japanese University Students

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Abstract

English language learners seek strong speaking, reading, writing, and listening skills. When it comes to the last it is commonly assumed that if students have many opportunities to hear spoken English then that exposure will improve their ability to comprehend it. Unfortunately, this is often not the case since many second language learners do not get the opportunity to develop their listening skills naturally. Despite this, classrooms dedicate little to no time in English for Academic Purposes coursework towards listening strategies and techniques. One strategy which has shown to be effective is "connected speech". Students learn how to hear the connection between words that native speakers develop naturally. In the Fall 2016 (September 16 – December 15), 43 students were the subject of a class dedicated to training their listening skills to identify this technique. A pre-test and post-test control group design analyzed listening interventions on listening fluency among English for Academic Purposes students. An independent *t-test* was used to measure the mean average scores on the listening section of the treatment group's Test of English as a Foreign Language exams (n=35) taken in December 2016 and were compared to scores taken in April and September 2016 (n=37). The treatment group saw mean gains of +3.03, findings that were significant. The research also compared Test of English as a Foreign Language results taken in April and September 2015 (n=38) to those taken in December 2015 (n=29). Students had slightly higher mean gains of +3.65, also significant, perhaps indicating other variables may have led to similar findings.

Keywords: listening fluency, connected speech, Japan, ESL students, TOEFL

Introduction

At Akita International University (AIU) in Northwest Japan, students are required to study one-year abroad at one of the school's 185 partner-universities as all coursework at AIU is taught in English. To qualify, learners must demonstrate proficiency in all learning domains by scoring 550 or higher in the Test of English as a Foreign Language (TOEFL). Though most succeed, some students are left repeating English for Academic Purposes (EAP) coursework and having to retake the TOEFL exam term after term in the hope of overcoming another milestone towards graduation.

One learning domain which often gets ignored is listening. Some instructors take a prescriptive approach to teaching listening skills by inserting a compact disc into a player and instructing students to shadow, transcribe, or just listen. Other past colleagues have abandoned this approach to teaching, complaining that the practice is pedagogically ineffective. Perhaps one reason we do not emphasize listening in the classroom is that it remains the most obscure and least understood among the four learning domains.

Research has shown that learners need to have effective strategies and techniques to become sufficient listeners. Chamot (1995) argued there is a significant relationship between strategy use and proficiency. However, many learners are unaware of how to improve their listening comprehension skills especially when confronted with the speed of spoken English produced by native speakers. Some teachers also purposely enunciate words or slow their speech down to facilitate the learner which will hinder development for students or cause them to listen to materials pronounced clearly and distinctly. As a result, from unfamiliar patterns of discourse to speech rates, to prosody, to vocabulary, learners face many challenges (Cross, 2009).

One listening strategy known to be effective is "connected speech" – a process in which students learn how to listen to the connection of words that native speakers develop naturally. The result, students become strategic listeners of English by understanding and anticipating the connection of words that take place in spoken English. The implementation and understanding of this learning strategy could be a key component in the success of not only improved listening for language learners, but also increased scores in TOEFL. Therefore, this current research hopes to shed light on how much listening time is necessary for students to make significant strides in this learning domain.

Literature Review

Among the four learning domains, listening is arguably the most complex. In fact, listening is the first encounter with the target language in a student's endeavor to acquire a new language (Berne, 2004). Dunkel (1993) argued the listening process is highly complicated; it is hard for a single instrument to measure all aspects of listening comprehension.

To make the classes student-centered, songs have been incorporated into classrooms by teachers with the idea that classes become active and fun. Though singing can be creative, helps to build rhythmic patterns and taps into a particular culture, it can be argued the use of singing to develop a second language (L2) improves speaking skills more than it does listening. Also, it becomes a challenge for the instructor to find songs universally appealing. Sometimes understanding the lyrics sung by the artist can be problematic even to a native-speaker of English. Lastly, the use of songs to improve listening skills might be left best for those with a musical background.

Studies have shown listening comprehension is broken down into three stages. The first involves perceptual processing, the encoding of the spoken message. The second stage is the mental representation of the sentences or the parsing of words. The last is the understanding of meaning known as the utilization stage. In essence, learners will react specifically to whether the spoken words are a question, a statement or a command (Anderson, 2009). This cognitive psychological approach is an alternative to the top-down and bottom-up process to listening comprehension, but some researchers have argued whether this strategy improves a learner's listening ability. Ridgway (2000) makes the point it is difficult for second-language learners to implement taught strategies while listening simultaneously.

One research study investigated the consequences of simultaneously reading and listening to the same material while learning English as a foreign language. It found that the redundancy of performing both tasks at the same time likely interferes with the learning, concluding when redundancy is added to the learning, the brain is used unnecessarily to attend to both sources of information (Moussa-Inaty, Ayres & Sweller, 2011). This additional process generates what cognitive load theorists call extraneous cognitive load, meaning too much unnecessary information is being memorized. By eliminating redundancy, the brain could be freed up to recall salient aspects of the lesson which helps to improve listening but the results showed no significant improvement in the other domains.

A study of Malaysian students emphasized listening instruction methods based on process-oriented approaches instead of product driven methods, placing a premium to facilitate the learner. During think-aloud sessions, the researcher would notate the students' overt listening behavior. By using an observation matrix, the information provided a tacit understanding of the listeners' problems and issues (Nair, Koo & Abu Bakar, 2014). The aforementioned is helpful to determine that change may be necessary to a specific curriculum but says nothing about which teaching methodology would be best to improve the program.

Another approach gaining popularity in the classroom is strategy-based instruction (SBI). SBI is a method of teaching in which strategies are selected for intensive learning in the classroom. These strategies can include comprehension, monitoring, predicting, clarifying and summarizing. SBI has two main elements: 1) Students are taught how, when, and why strategies are used to facilitate language acquisition and 2) strategies are integrated into class materials and are embedded into the language task (Cohen, 2000).

SBI is often ignored in Japan since Japanese teachers of English (JTE) teach the learning domains they feel comfortable with. In fact, Japan's education system is well known for its prescribed curriculum and high-stakes exams. Additionally, instead of teaching English "in" English, it is often taught in Japanese. Even at the university level, there is a common belief that the opportunity to hear spoken English improves comprehension naturally. Perhaps teachers do not appreciate the difficulty that students face when confronted with the speed of spoken English produced by native speakers. It becomes a challenge for students who have had little to no exposure to natural English (Rosa, 2002), as is the case for the vast majority of Japanese students who attend Akita International University (AIU).

The Research Study

The study investigated the impact of interventions on listening fluency between Japanese students taking an 80-minute listening class over the course of one semester in Fall, 2016. A

mixed-method research approach with a pre-test and post-test control group design was used. There was also a post-research survey.

Participants

Participants were first-year students at AIU taking Level 3 coursework in EAP as shown in Table 1. To help students increase the listening section of their TOEFL exam scores, participants in the Fall, 2016 term attended a strategy-based class. This class was held for 80 minutes every week in order to develop the ability to identify 'connected speech', where students learned how to hear the connection between words that native speakers develop naturally. The question remains how much exposure students need before there is a significant improvement in listening comprehension. Forty-three Level 3 students were the participants for this research by taking one semester of a listening fluency class emphasizing the use of this strategy. Participants attended the class for 15-weeks.

Table 1: EAP Level Placement

EAP Level	TOEFL Placement Score
Level 1	479 or lower
Level 2	480–499
Level 3	500 or higher

Instruments

Two episodes from the fifth season of *Friends* were chosen. They included *The One Where Ross Can't Flirt*, and *The One with Ross's Sandwich*. Students were also given deleted transcripts of those episodes for transcribing purposes as shown in Appendices A and B. The aim was expose students to the speed of spoken English with the following questions in mind:

- Does a weekly listening fluency class over the course of 15-weeks totaling 20 hours, significantly increase TOEFL listening scores?
- Are TOEFL listening scores taken in December 2016 significantly higher compared to scores taken in April and September 2016?
- How do the results above compare to students' scores from the year before?

Common listening instruments such as BBC News or other news programs were purposefully avoided since the proper enunciation of words is emphasized to facilitate the listener. Also, in the listening section of TOEFL the majority of questions are dialogue-based, testing the student's understanding of meaning or implication.

Methods

The listening portion of the participants' TOEFL exams was compared to Fall, 2015 students who did not receive the intervention. Level 3 participants in Fall, 2016 learned the connection patterns shown below:

1. Same consonant combination – students say one consonant sound as highlighted and underlined in bold.
   – Where is the bu**s s**top
   – I'll meet you **at t**welve o'clock.

2. Different consonant combination or consonant ending sound – execute the glottal stop. For Japanese students, *hot dog* in *Katakana* (one component of the Japanese writing system for the transcription of foreign loan words) is pronounced *ho-tu do-gu*. By executing the glottal stop, a four syllable compound noun is reduced in half. For the second example, *nice dress* is a simple adjective/noun combination with each word containing one syllable. In *Katakana*, this adjective/noun combination is pronounced *na-i-su do-ri-su*, each word containing three syllables.
    – I ate a ho**t d**og for lunch.
    – That is a ni**ce d**ress you're wearing.

3. Consonant vowel combination or consonant ending sound – visualize as one word
    – Can you tur**n o**n the lights?
    – I will ta**ke o**ut the trash.
    By visualizing turn on as turnon, the first syllable break occurs after the letter /r/ as underlined in bold. In the second example, take out becomes takeout, the first syllable break occurs after /a/ as underlined in bold, essentially reading these phrasal verbs in the following way: tur non, ta keout.

The activity involved watching episodes of the television show *Friends*. Each conversation would be played three to four times. While listening, students were instructed to dictate as much as they could comprehend on the deleted transcripts as shown in Appendices A and B. They were then asked to read aloud back to the teacher to demonstrate how much of the conversation they were able to pick up. The instructor wrote down the words repeated by the students using Microsoft Office on a projector screen for students to see. If words were missing, the students got additional attempts to listen to the dialogue. Once all the words were correctly identified, they were then instructed to demonstrate connected text. Afterwards, the teacher read each dialogue aloud with students reading and repeating. Each reading was delivered faster and faster, the idea being reading old material allows the students to read and hear the speed of spoken English. The exercise would finish by having the students hear the spoken dialogue from the sitcom one last time, so they could compare the rate of spoken English before and after the "connected speech" was identified before moving onto the next dialogue.

An independent *t-test* was used to measure the progression of both the treatment and the control group using the software Statistical Package for the Social Sciences (SPSS) to answer the three hypotheses aforementioned.

A post survey using a five-point Likert scale (5: Strongly Agree; 4: Agree; 3: Neutral; 2: Disagree; 1: Strongly Disagree) was administered to ascertain students' attitudes about whether or not the listening class helped to improve listening comprehension (see Appendix C).

Participants answered one additional question asking in which week they noticed a significant difference, if any, in improved listening comprehension.

Results

The purpose of this research was to determine if 20 hours of listening class time utilizing "connected speech" would significantly improve the listening section of TOEFL. The participants' mean listening scores taken shortly after the end of the fall term, in late

December, were compared to their mean scores taken in April 2016 or September 2016. Students who took their exams in April 2016 would have been Level 2 students in EAP who had matriculated up to Level 3. September 2016 students would have been first-semester students who took the exams about a week before the beginning of the fall semester to determine EAP placement. Those scores were compared to students who took the TOEFL the year before.

Table 2 is used to show the mean difference between pre-test and post-test scores. Exams taken in April and September 2016 (M=50.05; SD=4.42) were compared to exams taken in December 2016 (M=53.08; SD=3.93). With an alpha level of .05 and a *df* of 70, and with equal variances assumed, December exams had a mean gain of +3.03 compared to April and September exam scores; t(71)=3.03, p=.003. Based on the findings, the growth based on post-test scores of the treatment group is significantly higher compared to pre-test scores.

Table 2: Independent measures *t-test* Pre-test/Post-test 2016

Group	N	Mean Gains	Std. Deviation	Std. Error Mean		
Apr/Sept 16	**37**	**50.05**	**4.42**	**.727**		
Dec. 16	**35**	**53.08**	**3.93**	**.665**		
				95% confidence level		
t	**df**	**sig.(2-tailed)**	**Mean Diff.**	**Std. Error Diff.**	**Lower**	**Upper**
3.06	**70**	**.003**	**3.03166**	**.989**	**-5.005**	**-1.058**

Table 3 shows mean scores between April and September 2015 (M=49.55; SD=6.0) versus scores taken in December 2015 (M=53.20; SD3.65). Based on the findings, with an alpha level of .05 and a *df* of 62.28, the null hypothesis was rejected because the *t* score value fell within the critical region. The conclusion is that the growth based on the post-test scores is also significantly higher compared to pre-test scores. December 2015 scores had mean gains of +3.65; +.62 gain compared to December 2016 scores; t(66)=3.07, p=.003.

Table 3: Independent measures *t-test* Pre-test/Post-test 2015

Group	N	Mean Gains	Std. Deviation	Std. Error Mean		
Apr/Sept 15	**38**	**49.55**	**6.00**	**.973**		
Dec. 15	**29**	**53.20**	**3.65**	**.679**		
				95% confidence level		
t	**df**	**sig.(2-tailed)**	**Mean Diff.**	**Std. Error Diff.**	**Lower**	**Upper**
3.07	**62.28**	**.003**	**3.65**	**1.18**	**-6.02**	**-1.28**

Discussion

Despite significant improvement in the listening section of TOEFL taken by students at the end of December 2016, students who took exams in December 2015 also witnessed significant gains. The research concludes the listening fluency class for the treatment group was not the primary reason for increased exam scores. Other variables such as EAP coursework, an English-speaking environment in which 20-percent of students come from overseas, a facility providing students with movies, books, educational software and other materials likely contributed to significant gains in listening. Accordingly, this analysis has

shown that 20 hours of intervention over 15-weeks is likely not enough time to make significant gains in TOEFL listening.

The research parallels a study of fifteen Japanese students who received slightly less intervention compared to the current study and were also part of a quasi-experiment. Participants received 90-minutes of listening intervention by watching a BBC news website over 10-weeks totaling twelve hours (Cook, 2009). The participants self-selected one of two Current Affairs classes forming the experimental group (EG) of seven students and a comparison group (CG) of eight students. EG received 90-minutes of strategy instruction appropriate to the given listening task. Despite significant gains by both groups between pre-test and post-test scores, the independent *t-test* did not indicate a significant difference between the two groups (Cook, et al, 2009).

On the basis of these findings, it is evident that TOEFL should not be the only indicator of improved listening comprehension since this learning domain remains largely ambiguous (Alderson & Bachman, 2001). In support of this, a quantitative non-experiment was conducted seeking the attitudes of the treatment group on a five-point scale (5-Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1-Strongly Disagree).

Table 4: Survey Questionnaire Results

Survey Questions	Mean Score
Connected Speech increased my ability to listen to the speed of English.	4.1
The listening fluency class improved my ability to comprehend English.	3.98
The listening fluency class is an effective way to increase listening comprehension.	3.87
The listening fluency class increased my ability to understand spoken English with a native speaker.	4
The listening fluency class increased my ability to understand American humor.	4.2
The listening fluency class increased my ability to understand idiomatic expressions.	3.92

The results show the vast majority of students believed the listening fluency class improved their listening skills as shown above in Table 4. When asked if the class improved their ability to hear spoken English, the mean score was 4.1 on a five-point scale. When asked if it improved their comprehension, the results were also high with a mean score of 3.98. Additionally, students were asked to estimate in which week they began to notice a significant difference in listening comprehension. Students were invited to circle the answer closest to their experience as shown in Appendix C. No student noticed any significant difference between weeks 1 and 3. However, 90 percent of students answered they noticed a significant improvement during the term with the largest percentage (33%) reporting gains between weeks 7 and 9, as shown in Table 5".

Table 5: Significant Listening Improvement Gains

Weeks	Percentage
1-3	0%
4-6	10%
7-9	33%
10-12	13%
13-15	15%
No difference	10%

In consequence, it could be that learners were unfamiliar with the topic itself in TOEFL and may have come across too many unfamiliar words to understand the recording. Moreover, a large portion of the listening section requires that the listener understand intent as information itself is often not enough. Test-takers must negotiate the speakers' attitudes, the setting, and be able to anticipate natural sequences. What is likely to happen next becomes much easier if the learner can visualize where the conversation is taking place. Another factor to consider, the exam taker is required to listen, understand, and maintain the information in memory to answer a variety of questions related to the topic. Arguably, L2 learners are being tested for their ability to listen as opposed to being tested in their second language skills. The score-based interpretation of TOEFL and its accuracy to determine a learner's second-language ability is a debate that has led to many academic research. Lastly, the instrumentation selected may have had a washback effect in seeing gains for Cognitive Academic Language Proficiency (CALP) but positive survey responses perhaps is an indication students noticed significant gains in Basic Interpersonal Communicative Skills (BICS) as AIU students often engage with internationals.

Conclusion

Conceivably different instrumentation could have been used since much of the content involved the understanding of colloquial and idiomatic expressions which may not be useful in preparation for TOEFL. Moreover, with a class size of 43 students, this type of learning environment lacks the discursive cues sometimes necessary to facilitate a large class (Camiciottoli, 2004). Furthermore, positive feedback from participants based on post-survey results demonstrates the need for additional studies to determine if increased intervention time would significantly increase scores between the treatment and control group and to assess how much listening intervention time is necessary to actuate those differences.

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Appendix A

*Friends***: The One with Ross's Sandwich**

Phoebe: _____?

Chandler: _____?

_____?_____.

Phoebe: Ew-eww!! Undies!

Rachel: _____! _____

_____? _____?

Ross: Well, _____!

Chandler: Well, they're Joey's! They gotta be Joey's!

(Rachel turns and stares at him.)

Joey: Yeah, they're mine.

Chandler: See? They're Joey's! J-J-J-J-J-Joey's!

Ross: _____?

Joey: _____.

Appendix B

Friends: The One Where Ross Can't Flirt

Ross: Hey!

Chandler: Hey!

Ross: Wow! _____.

_____?

Chandler: _____,

we've got reservations at Ja George.

Ross: Wow! _____?

Chandler: _____

_____.

Delivery Girl: Hi Chandler!

Chandler: Hey Caitlin! _____.

Caitlin: Ugh! _____!

_____.

Appendix B

Friends: The One Where Ross Can't Flirt

Appendix C
Survey

Confidentiality: This survey should take less than five minutes of your time. You will not be asked to attach your name to your survey responses. Individual responses will be used for research purposes only and will be strictly confidential. Please ask the surveyor to clarify any questions you don't understand.

Instructions: Check the box that most closely matches the question.

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Connected Speech increased my ability to listen to the speed of English.					
2. The Listening Fluency class improved my ability to comprehend English.					
3. The Listening Fluency class is an effective way to increase listening comprehension.					
4. The listening fluency class increased my ability to understand spoken English with a native speaker.					
5. The Listening Fluency class increased my ability to understand American humor.					
6. The Listening Fluency class increased my ability to understand American idioms.					

Circle the box that best applies to you.

I began to notice a significant difference in my listening skills during the following week.

Weeks 1-3	Weeks 4-6	Weeks 7-9	Weeks 10-12	Weeks 13-15	No significant improvement

Teachers' Knowledge Indices as Predictors of Secondary School Students' Academic Achievement in Kwara State, Nigeria

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Abstract

That less than 40% of candidates who took the Senior School Certificate Examinations in Nigeria between 2009 and 2015 had credits and above in English language and Mathematics has become a source of worry to all stakeholders. Results of research efforts to provide plausible explanations to the problem have been inconclusive. Also, not much had been done to assess the contribution of teachers' knowledge indices as likely sources. This study therefore investigated the predictive value of Teachers' Depth of Subject Content Knowledge and Depth of Pedagogical Knowledge on Students' Academic Achievement in English Language and Mathematics. Specifically, the study investigated which category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc) had the deepest Depth of Subject Content Knowledge; the deepest Depth of Pedagogical Knowledge; the deepest Depth of Subject Content and Professional Knowledge; and the predictive ability of Depth of Subject Content and Professional Knowledge for Students' Academic Achievement. The sample comprised seventy-eight English Language and Mathematics teachers from thirty-two randomly selected secondary schools in Kwara State; and the intact SS II classes taught by the teachers. Quantitative data were collected through tests, observations and vignettes; and analysed using descriptive and inferential statistics. Findings showed that teachers with B.Sc. demonstrated the deepest Depth of Subject Content Knowledge, Depth of Pedagogical Knowledge and Depth of Subject Content and Professional Knowledge. Also, pedagogical and subject content knowledge of teachers were found to be significant predictors of Students' Academic Achievement. Significant differences were observed between the Depth of Subject Content Knowledge and Depth of Pedagogical Knowledge of the English Language and Mathematics teachers in favor of Mathematics teachers. Similarly, students' performance in English Language was lower than that of Mathematics, though not statistically significant. These findings raised concerns of profound implications for teacher education curriculum in Nigeria.

Keywords: teacher knowledge, subject content, pedagogical content, academic achievement, teacher attributes, teacher education curriculum

Introduction

Secondary education has remained a major gateway to higher education and employment for those who may not proceed beyond that level. Most citizens attending schools have thus not considered themselves to have been sufficiently prepared to function in the Nigerian society until they have graduated from secondary schools. Successful completion, and particularly having credit passes in English Language and Mathematics, are necessary for all secondary school graduates. Policy on education has made these subjects compulsory to be offered and passed, as well being required to advance to higher levels of education. There is, however, unsatisfactory performance in certificate examinations at this level as the rate of failure has been considered high by stakeholders.

The high rate of students' failure in Senior Secondary Certificate Examinations (SSCE) has become a perennial source of worry to all stakeholders in the education sector in Nigeria. The same is true of its equivalents, such as the General Certificate Examination (GCE), and the University Tertiary Matriculation Examination (UTME). In 2015, for instance, more than 60% of students failed English Language in the SSCE; while only 38.6% candidates obtained credit in five subjects including English and Mathematics (West African Examination Council, 2015). There is a need to reverse this trend because poor performance in SSCE leads to colossal wastage of educational investment and reduction in quantity and quality of candidates accessing tertiary education. It also limits students' learning effectiveness which, in turn, compromises quality of tertiary education products in terms of cognate ability and service delivery competence.

Various efforts by education researchers to provide a valid explanation for the trend have not yielded conclusive results. For instance, Tella (2007) investigated the impact of motivation on secondary school students' Mathematics achievement in Nigeria. He reported that there was a significant difference in Mathematics achievement of students on the degree of their motivation. McDonald (2001) also found that two thirds of high school students appeared to have experienced an uncomfortable level of test anxiety which consequently had a negative effect on their academic performance.

Any solution to the problem of high failure rates in SSC Examinations should also involve critical assessment of the contributions of teacher quality in the discharge of their responsibilities as learning facilitators. Although learning can take place without teaching, the roles of the teacher as facilitator of learning are indispensable in the field of education (Figure 1).
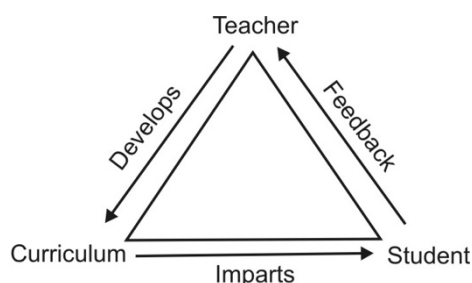

Figure 1: Components of the teaching-learning relationship
(Source: Olasehinde-Williams, 2012)

As shown in Figure 1, teachers have responsibilities to gather information to determine what subject content to teach, develop curriculum, determine the strategies and methods for teaching, impart knowledge, evaluate teaching and learning and finally provide feedback. Teachers can only teach "what" they know in the ways they know "how" to teach. Thus, the significance of having high quality teachers in the teaching-learning relationship cannot be over-emphasised. Indeed, the pivotal roles of quality teachers in providing quality education are well documented in the National Policy on Education (Federal Republic of Nigeria, 2013). The Teachers Registration Council of Nigeria (TRCN) also noted that "no education system can rise above the quality of its teachers" (TRCN, 2004, p.8).

Agoro and Akinsola (2013) and Ladipo (2013), for instance, suggested that poor teacher quality is one of the significant factors responsible for the consistently poor performance of secondary school students in public examinations in the country. Teacher quality is generally believed to be basically dependent on the nature of the training that teachers receive and there is no doubt that teachers differ in their depth of knowledge of the "what" to teach and the "how" to teach basically because of disparities in their own pre-service training. In Nigerian secondary schools, for example, two categories of teachers (qualified and non-qualified teachers), from three different learning paths, are responsible for preparing students for public examinations.

Two of the three learning paths qualify individuals for the teaching profession in Nigeria. Firstly, during training, individuals may combine core teacher education courses (Pedagogical Knowledge) with minor teaching subject courses (Subject Content Knowledge) for a period of three to four years, for the award of the Bachelor in Education Degree. Secondly, individuals may first obtain an Honors degree (Bachelor of Science or Bachelor of Arts) in one or two subjects (Subject Content Knowledge) and later undertake a one-year Postgraduate Diploma in Education (PGDE) Certificate (Pedagogical Knowledge). Although the proportions of teaching subject and education courses both groups undertake are not the same, it is generally assumed that both include sufficient proportions to produce competent teachers (Abimbola, 2012). Consequently, both categories of teachers are accorded professional teacher status and are qualified for formal admission into the teaching profession upon registration with the TRCN. Non-qualified teachers, on the other hand, are individuals who also teach in Nigerian secondary schools with Honors Degrees in Science, Social Sciences and Arts-related courses without undertaking any education course at all in the university. Since such teachers have exposure to Subject Content Knowledge only, without Pedagogical Knowledge, they are categorised as non-professional teachers and are not qualified for formal admission into the teaching profession.

These categories of teachers, professional and non-professional, have been receiving criticisms from major stakeholders in the education sector. In respect to the learning paths to teacher certification, there are concerns that the teaching subject courses offered by B.Ed/B.Sc. Ed. /B.A. Ed. graduates, and the pedagogical content knowledge in the PGDE format may not be sufficiently adequate to make for sufficiently competent and effective teachers. For instance, education students minor in their teaching subjects and devote a substantial part of their training to pedagogical knowledge and skills. In the same way, PGDE students would have acquired more of subject content knowledge since they had earlier obtained their degrees and have thus also obtained less pedagogical knowledge and skills. Similarly, there are concerns that unprofessionally trained persons recruited as teachers in Nigerian secondary schools are mostly graduates in various disciplines that may or may not even be related to the subject that they were recruited to teach.

It was assumed in this study that such discrepancies in the professional and academic qualifications of teachers will likely be reflected in the teachers' depth of subject content and pedagogical knowledge; in the ways they discharge their roles as facilitators of learning (Henze, Driel & Verloop 2008); and consequently in the ways they impact their students' academic achievement.

High rates of failure will be unexpected when the teachers and their teaching are very positive, and the results obtained contradict their input. It is unwanted when effort by the teacher is not strong enough to bring about expected success. Though the study of secondary school students in Kenya by Waseka, Simatwa and Okwach (2016) showed the expected result that teachers with the Bachelor of Education qualification significantly influenced their students' performance, it also revealed the unexpected outcome with the discovery that teachers with the Master of Education or Diploma qualifications did not significantly influence the performance of their students. There is a contradiction when holding a higher degree like Master of Education does not contribute significantly to the prediction of students' performance. It is necessary to clarify contradictions like this with research and to particularly determine whether the teachers have deficiency in subject content or pedagogical knowledge.

The holistic learning theory stressed by psychologists such as Piaget and Bloom provide the theoretical underpinning for this assumption. Piaget (1936) and Bloom (1956) identified three learning domains to which students must be exposed: Cognitive Learning (acquisition of knowledge through direct teaching); Affective Learning (acquisition of feelings, values, motivation and attitudes through the process of observation); and Psychomotor Learning (acquisition of skills through observation and practice). However, effective and holistic learning must involve all the three: that is stimulate critical thinking, stimulate interest and develop skill.

For instance, Hill, Rowan and Ball (2005) explored whether and how teachers' mathematical knowledge for teaching contributes to gains in students' mathematics achievement. Findings of the study showed that teachers' mathematical knowledge was significantly related to students' achievement gains in both first and third grades; and provided support for policy initiatives designed to improve students' mathematics achievement by improving teachers' mathematical knowledge. Baumert et al. (2010) investigated teachers' mathematical knowledge, cognitive activation in the classroom, and student progress. Findings of the study showed that teachers with a higher PCK score created better lessons, which had positive effects on the students' content knowledge and test results.

Adediwura and Bada (2007) investigated perception of teachers' knowledge, attitude and teaching skills as predictors of academic performance in Nigerian secondary schools. They found that students' perception of teachers' knowledge of subject matter, attitude to work and teaching skills were significantly related to students' academic performance. In an ongoing study related to teacher professional knowledge, Olasehinde-Williams, Yahaya, Sanya, Owolabi & Jimoh are investigating the comparative effectiveness of teaching strategies (Collaborative, Critical thinking and Technology-integrated teaching strategies) in reducing secondary school students' failure in Senior School Certificate English Language Examination in Kwara State, Nigeria. Preliminary findings of the study suggest the superiority of each strategy over the traditional teaching strategy.

Studies by Abell (2007) and Baumert et.al. (2010) have focused on the impact a single teacher variable on students' academic achievement. Abell (2007), Park and Oliver (2008) Lee and

Luft (2008), and Baumert et.al. (2010) have investigated the impact of teacher variables on students' academic achievement in one subject only and they focused especially on Science subjects. Findings of most of the studies are generally inconclusive (Park & Oliver, 2008). Besides, most of the studies were conducted in other settings and as such their findings are not directly applicable to Nigeria because of socio-cultural differences. Thus, the apparent dearth of studies on the extent to which teachers' subject content knowledge and pedagogical knowledge relate to students' academic achievement in Nigeria made this study imperative.

Literature Review

Critical insights for the study were gleaned from extant literature related to teacher professional knowledge, data gathering techniques and study approach as conceptualized in this study. As early as 1987, Shulman had distinguished seven categories teachers' professional knowledge: content knowledge; curricular knowledge; pedagogical content knowledge; general pedagogical knowledge; knowledge of learners and their characteristics; knowledge of educational contexts; and knowledge of educational ends, purposes and values (1987). Subsequently, researchers identified specific components for study, which also informed their choice of measurement techniques. For instance, Kirschner, Borowski and Fischer (2010) focused on three levels of teachers' knowledge areas (i) declarative knowledge, (ii) procedural knowledge and (iii) conditional knowledge including teachers' reactions to critical teaching situations, which they measured through experiments, teaching strategies and vignettes (that is, describing short situations in a classroom).

Baumert et al. (2010) focused on teachers' knowledge of science and the teaching/learning process as components of teacher professional knowledge and gathered data through paper and pencil tests as well as observation of videotaped lessons. Henze, Driel and Verloop (2008) focused on teachers' knowledge about instructional strategies concerning a specific topic; students' understanding of the topic; ways to assess students' understanding of the topic; and goals and objectives for teaching the specific topic in the curriculum. To measure these components, in the Netherlands, the researchers followed nine teachers for a period of three years in their natural settings to see if, and how, their initial Pedagogical Content Knowledge (PCK) developed while they were teaching a new subject.

The Research Study

To address some of the gaps in our current understanding of the important factor of student academic achievement, this preliminary study investigated the relative contributions of teachers' training background to their depth of subject content and pedagogical knowledge as well as the extent to which teachers' subject content and pedagogical knowledge improve students' learning outcomes in two core subjects, English Language and Mathematics ,which are compulsory for all secondary school students in Nigeria. The goal of the study was to establish the impact of teacher professional knowledge on students' learning outcomes. Specifically, 4 research questions were addressed and 3 hypotheses tested in the study.

Research Questions
1. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the deepest Subject Content Knowledge?
2. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the most adequate DPK?

3. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the strongest DSCPK?
4. What is the predictive ability of teachers' DSCPK for students' success in examination?

Hypotheses
1. There is no significant difference in the depth of pedagogical knowledge between sampled English Language and Mathematics teachers.
2. There is no significant difference in the subject matter content knowledge between sampled English Language and Mathematics teachers.
3. There is no significant difference in the performance between sampled senior secondary school English Language and Mathematics students.

To these researchers' minds, empirically determining what mix of teacher subject content and pedagogical knowledge best predicts students' learning outcomes is critical to reversing the current trend of high failure rate of students in public examinations in Nigeria. Such a reversal, it was hoped, would enhance the quality and quantity of candidates accessing tertiary education, enhance the quality of tertiary education products in terms of cognate ability and service delivery competence and, consequently, boost the nation's developmental status.

In this study, three components of teachers' professional knowledge and the extent to which they impact student learning outcomes were investigated:
1. Depth of Subject Content Knowledge (DSCK);
2. Depth of Professional Knowledge (DPK);
3. Depth of Subject Content and Professional Knowledge (DSCPK), patterned after Gess-Newsome's (1999) integrative knowledge category;
4. Students' Academic Achievement (SAA);
5. Differences in DSCK and DPK of teachers and their SAA in English Language and Mathematics; and
6. Difference in students' academic achievement in English Language and Mathematics.

Figure 2, developed by the researchers, presents the schematic representation of how the variables were controlled.
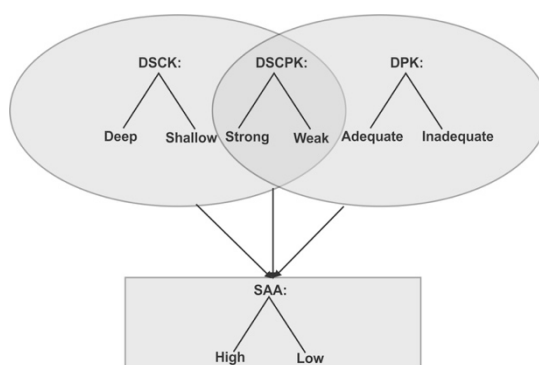

Figure 2: Schematic representation of DSCK, DPK, DSCPK and SAA

(Note:
DSCK: Depth of Subject Content Knowledge, whether Deep or Shallow
DPK: Depth of Pedagogical Knowledge, whether Adequate or Inadequate
DSCPK: Depth of Subject Content and Pedagogical Knowledge, whether Strong or Weak
SAA: Student Academic Achievement, whether High or Low)

Methodology and Methods

The research design adopted for the study was descriptive survey because of its capacity to allow assessment of certain attributes, properties or characteristics in a situation at one or more point in time (Hassan, 1995). Originally, the plan was to sample two hundred Senior Secondary II (SSII) English Language and Mathematics teachers from 10 randomly selected secondary schools across the three Senatorial Districts of Kwara State (that is, Kwara North, Kwara Central and Kwara South), but the reality of the situation in the field altered this plan because most of the schools had only 1 teacher each for SSII English Language and Mathematics. Consequently, the number of secondary schools was increased to 32, randomly selected across the three Senatorial Districts of the State. This was done to ensure fair representation of every part of the State. Thus, all the available SSII teachers of English Language and Mathematics in each of the 32 schools, totaling 78, participated in the study. These purposively sampled participants provided data on DSCK and DPK for the study. At the learners' level, classes of SSII students of each teacher-participant took part in the study so that their test scores could be readily matched with their teachers' DSCK, DPK and DSCPK.

Instruments employed for data collection were paper and pencil tests, used to measure teachers' DSCK and students' achievement in both subjects, and observation of teaching strategies and vignettes, that is short classroom situations to which teachers responded to measure their DPK, because of the potential of such multiple data sources to yield valid, rich, comprehensive and reliable data. Face and content validity, as well as test-re-test reliability measures of the objective tests and vignettes were determined. Observation of class teaching and management were subjected to inter-rater validity. The internal consistency reliability measures of the DSCK and DPK objective tests were 0.94 and 0.82 respectively, while 0.62 and 0.63 were obtained for the English Language and Mathematics objective tests respectively. All the instruments yielded quantitative data.

Members of the research team and trained research assistants, comprising lecturers and Ph.D. students of Educational Measurement and Evaluation, were involved in the data collection. Ethical guidelines for research and data collection were carefully observed. Data gathering spanned three weeks and occurred in the second school term to enable substantial coverage of the syllabus to enhance the validity of students' academic achievement. Measures of students' academic achievement were obtained about one week into the schools' official examination period so as not to disrupt the school program and to fall within a period when students naturally prepared for end-of -term examinations. The maximum possible score on the test of teachers' DSCK and DPK was 100%, where 60–100% indicated Deep Knowledge and less than 50% indicated Shallow Knowledge. Similar rating was adopted for the students' Academic Achievement Test, with 60–100% indicating high achievement and less than 50% indicating low achievement.

Results

Seventy-eight SSII teachers of English Language and Mathematics were sampled as participants in the study from the three Senatorial Districts of Kwara State, Nigeria. However, only 75 of them participated fully in the study by making their lesson notes available for inspection, subjecting their lessons to observation, completing the paper and pencil test, responding to the vignettes and having the students taught by them assessed. The 75 participants comprised 33 female and 42 male teachers. Thirty-nine of the participants were English Language teachers while the other 36 taught Mathematics. Their ages ranged from 21–

60 and they had between 1 and 30 years of teaching experience. Answers to the four research questions are presented below.

1. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the deepest Subject Content Knowledge (DSCK)?

Assessment of the sampled teachers' DSCK was carried out through observation of the content of lessons, taught using the Faculty of Education's, University of Ilorin, teaching practice assessment format, and also by responses to a cognate test scored in percentage. The mean score on both measures was calculated and each category of teachers compared with the mean. A summary of the assessment is presented in Table 1.

Table 1: Mean Scores of teachers' Depth of Subject Content Knowledge (DSCK)

Qualification	Frequency	Mean Score in Percentage
PGDE	2	44.00
NCE	4	44.75
B.A. Ed.	21	49.43
B.Sc. Ed.	11	57.83
B.A.	16	59.69
Others	8	62.19
B.Sc.	13	65.42
Total	75	Grand Mean = 56.59

As shown in Table 1, the grand mean of DSCK among teachers was 56.59%. The lowest mean score was observed among teachers with a PGDE (44%); mean score of 49.43% was obtained by holders of a B.A. Ed and this was lower than the grand mean. Teachers having a B.Sc. Ed. degree with a mean score of 57.83% were better than their B.A, Ed counterparts (49.43%); while teachers with a B.Sc. had the deepest mean DSCK of 65.42%.

2. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the most adequate Depth of Pedagogical Knowledge (DPK)?

Sampled teachers were exposed to an assessment of DPK through observation of their involvement in classroom processes, responses to vignettes and personal interview. Based on their responses, each of them was scored in percentage and the mean score for each category of teachers was calculated. A summary of the assessment is presented in Table 2.

Table 2: Mean Scores of tTeachers' Depth of Pedagogical Knowledge (DPK)

Qualification	N	Mean Score
B.A.	16	41.13
NCE	4	44.75
Others	8	49.63
B.A. Ed.	21	50.90
PGDE	2	53.00
B.Sc. Ed.	11	54.73
B.Sc.	13	56.08
Total	75	Grand Mean = 49.87

Table 2 shows that, despite generally low levels of depth of pedagogical knowledge, of the mean scores demonstrated by the sampled teachers, those holding the B.A. degree had the poorest mean score of 41.13%; while B.A. Ed., PGDE, B.Sc. Ed. and B.Sc. teachers recorded above average mean scores of 50.90%, 53%, 54.73%, and 56.08% respectively. The teachers with the most adequate depth of pedagogical knowledge were those holding the Bachelor of Science degree (56.08%).

3. What category of teachers (B.Ed. /B.Sc.Ed. /B.A.Ed.; PGDE; or B.A. /B.Sc.) has the strongest Depth of Subject Content and Pedagogical Knowledge (DSCPK)?

Scores on the measures of DSCK and DPK were added and the mean score for each category of teachers summarized as presented in Table 3.

Table 3: Mean scores of teachers' Depth of Subject Content and Pedagogical Knowledge (DSCPK)

Qualification	Frequency	Mean score out of 200
NCE	4	89.50
PGDE	2	97.00
B.A. Ed	21	100.33
B.A.	16	100.81
Others	8	111.81
B.Sc. Ed.	11	112.55
B.Sc	13	121.50
		Grand Mean KSCPK = 106.45

The mean DSCPK score was found to be 106.45 as shown in Table 3. Holders of a B.Sc. demonstrated the strongest DSCPK of 121.50 and they were followed by those with a B.Sc. Ed. with 112.55. On the other hand, NCE holders had the weakest depth of DSCPK (89.50).

4. What is the predictive ability of teachers' DSCPK for students' success in examination?

Students taught by the 75 teachers who participated in this study were tested in those same subjects and their scores regressed on the assessment of their teachers' subject content and pedagogical knowledge to determine their predictive value. The results of the regression analysis are summarized in Table 4.

Table 4: Prediction of students' performance by teachers' Depth of Subject Content and Pedagogical Knowledge

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	.327[a]	.107	.082	14.43578	.107

Table 4 shows a coefficient of multiple correlations (R) of 0.327 which indicated that both pedagogical and subject content knowledge of sampled teachers were significant predictors of students' success in examinations. Findings of the study further revealed that the two variables accounted for 10.7% of the total variance of students' success in examinations as shown by the R^2 of 0.107. An analysis of variance was carried out to ascertain the significance of the prediction of students' success by their teachers' subject content and pedagogical knowledge (Table 5).

Table 5: ANOVA of prediction of students' success by teachers' Depth of Subject Content and Pedagogical Knowledge

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1768.126	2	884.063	4.242	.018
	Residual	14795.820	71	208.392		
	Total	16563.946	73			

As shown in Table 5, the F ratio of 4.242 and df of 2, 71 was significant at 0.018 indicating that the sampled teachers' depth of subject content and pedagogical knowledge significantly predicted their students' performance. Table 6 contains the summary of the test of the contribution of each predictor in the regression analysis.

Table 6: Strength of teachers' Depth of Subject Content and Pedagogical Knowledge in the prediction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	44.944	6.859		6.552	.000
	Pedagogical Scores	-.186	.114	-.186	-1.633	.107
	Knowledge Scores	.219	.082	.304	2.669	.009

As shown in Table 6, the unstandardized regression coefficients of pedagogical and subject content knowledge were -0.186 and 0.219 respectively and their standardized regression coefficients were -0.186 and 0.304. Though the two variables were joint predictors of students' achievement, pedagogical knowledge did not contribute significantly to the prediction with a t-value significant at 0.107.

Hypothesis 1: There is no significant difference in the depth between pedagogical knowledge of sampled English Language and Mathematics teachers.

The F-ratio of the Leven's test of equality of variances revealed a difference between variances of depth of pedagogical knowledge of English Language and Mathematics teachers (5.668, p < 0.05) as shown in Table 7. It was further observed that difference existed between the mean of the depth of pedagogical knowledge of teachers of English Language and that of Mathematics teachers (t = -2.034, p < 0.05). These results indicate that there was significant difference between the depth of pedagogical knowledge of English Language and Mathematics teachers.

Table 7: Results of Independent Samples Test of Depth of Pedagogical and Subject Knowledge of Teachers of English Language and Mathematics and their Students' Scores

| | | Leven's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig 2tailed	Mean Diff	Std. Error Diff	Lower	Upper
Pedagogical Scores	Equal variances assumed	5.668	.020	-1.998	73	.049	-6.7735	3.39077	-13.53130	-.01571
	Equal variances not assumed			-2.034	64.389	.046	-6.7735	3.33091	-13.42699	-.12002
Knowledge Scores	Equal variances assumed	15.712	.000	-2.871	73	.005	-13.1880	4.59359	-22.34304	-4.03303
	Equal variances not assumed			-2.826	60.087	.006	-13.1880	4.66657	-22.52229	-3.85378
Students' Scores	Equal variances assumed	0.411	.524	-1.855	72	.068	-6.4000	3.45006	-13.27758	.47758
	Equal variances not assumed			-1.854	70.934	.068	-6.4000	3.45250	-13.28419	.48419

The summary in Table 8 shows that the teachers of Mathematics demonstrated a deeper level of pedagogical knowledge compared to the teachers of English Language.

Table 8: Group statistics of teachers' Depth of Pedagogical and Subject Content Knowledge and their students' scores

Variables	Subject Taught	N	Mean	Std. Deviation	Std. Error Mean
Pedagogical Scores	English Lang.	39	46.6154	17.44407	2.79329
	Mathematics	36	53.3889	10.88716	1.81453
Knowledge Scores	English Lang.	39	50.2564	15.66545	2.50848
	Mathematics	36	63.4444	23.61016	3.93503
Students' Scores	English Lang.	39	45.0000	14.72735	2.35826
	Mathematics	35	51.4000	14.91781	2.52157

Hypothesis 2: There is no significant difference in the subject matter content knowledge between sampled English Language and Mathematics teachers.

The F-ratio of Leven's test of equality of variances indicated a significant difference for English Language and Mathematics teachers' subject matter content knowledge (15.712, $p < 0.001$). There was also a significant difference between the mean of depth of subject content knowledge of English Language and Mathematics teachers ($t = -2.826$, $p < 0.05$). Table 8 also shows that Mathematics teachers had a significantly deeper knowledge of their subject matter.

Hypothesis 3: There is no significant difference in the performance between sampled senior secondary school II English Language and Mathematics students.

The Leven's test of equality of variances revealed no significant difference in the variances of students' performance of senior secondary school II in English Language and Mathematics (0.411, $p > 0.05$) as shown ion Table 7. Also, no significant difference was observed in the mean scores of students in English Language and Mathematics ($t = -1.854$, $p > 0.05$). Students' performance was found to be better in Mathematics than English Language.

Discussion

Findings in this study suggest that teacher training tends to have a debilitating influence on subject content knowledge as those who obtained their degree in the same or even a related subject to the ones they teach tend to have lower scores in the test of knowledge of subject matter content. This may also question the observation by Abimbola (2012) that the exposure to courses in Faculties of Education is adequate to produce competent teachers. It should be noted that a subject in which one majors at the university level carries the heaviest weight in terms of credits offered and hours spent for lectures and practical sessions. The other subjects or courses are subsidiary and thus the hours spent receiving lectures or being exposed to practical are lower thus informing the use of major and minor to describe them. Viewed from this perspective therefore, the offering of education courses in the university as their major tends to make it difficult for education students to accommodate as many courses and hours as those of their counterparts that major in the teaching subjects like English Language and Mathematics investigated in this study. At the point of graduation, those who obtained degrees in the teaching subjects are more knowledgeable and skilled in those subjects than their counterparts whose major is education because they have actually offered more courses and have been exposed to more practical sessions in the subjects. The question of adequate

knowledge comes in only when considering issues of competence to teach at the secondary school level. What is considered adequate for use by them in teaching students needs proper analysis.

In relation to teachers' DPK, the results of this study generally fell in the expected direction as the DPK of most untrained teachers was found to be weak. It is, however, surprising that a category of untrained teachers, for example those holding the Bachelor of Science degree, still had the most adequate depth of DPK. Though it was discovered that a few of those with a B.A. or B.Sc. as their highest educational qualifications had earlier gone through the Nigeria Certificate in Education (NCE) training, which is also a professional teacher qualification, the fact that the Bachelor of Science or Art in Education curriculum offers deeper professional exposure should imply that products still perform better. Could the fact that many teachers of English Language and Mathematics might have had some measure of pedagogical knowledge passed through specialized seminars, workshops and other training programmes, which are regularly organized to stem the tide of mass failure in schools, have been responsible for this unexpected result? The critical issue here is that professionally trained teachers are expected to be clearly better and more competent in DPK. There is a problem when trained teachers and the untrained have comparable depth of pedagogical knowledge. The exposure of the untrained to specialized seminars and workshops may not be sufficient factor to explain this observation.

Findings in this study also indicated that teachers who had received professional training demonstrated weaknesses in subject content and pedagogical knowledge combined with mean scores just barely half of the mark obtainable. Plausible explanation could be that these very important skills are treated with levity when teachers start practicing thus supporting reports of studies by Harris and Sass (2007), Agoro and Akinsola (2013), and Ladipo, (2013), pointing in the direction of poor quality of teachers in secondary schools. The role of teachers as researchers may be threatened by the absence of good libraries to support their preparation for instruction. Merely obtaining teacher's copy of recommended textbooks and access to it cannot be afforded in some institutions, not to talk of having access to alternative textbooks for cross referencing, depth and balance. Reading and revising topics to be taught to students (which the teachers themselves learned many years earlier) may thus be taken for granted. Coupled with this is the years of teaching experience during which teachers have repeatedly taught the same topics. The teachers may then be working under the assumption that the topic is known and proceed without serious preparation. When this happens, teachers rely on residual knowledge and thus weakens their effectiveness and delivery. This implies that the teachers may downplay the basic principles of instruction in their preparation for the lessons they need to deliver. Amid these, teachers of Mathematics and English Language have the tendency to have many more lessons to teach which places more demand on their time for preparation.

As expected, the subject content and pedagogical knowledge of teachers significantly predicted students' performance in English and Mathematics examinations. However, the variance of students' performance accounted for by both variables was found to be 10.7%. This suggested that there are several other variables that account for students' level of success traceable, for instance, to the students themselves, their teachers, the school, home environments and such other sources.

Teachers of Mathematics were observed to be having deeper pedagogical and subject matter content knowledge. The differences in the depth of their knowledge in these two components were found to be significant. Whereas a wider selection of graduates of related fields could feel competent to teach English, it is not so with Mathematics. Not many teachers are ready to

accept teaching Mathematics as could happen to English Language. There is therefore the tendency to have teachers from varied related fields teaching English Language but not Mathematics.

The grand mean of students' performance in English Language was found to be lower than that of Mathematics. This outcome seems to be the likely combined effect of a deeper pedagogical and subject matter content knowledge observed among teachers. It confirms the initial hunch that informed this study and the general feeling that teachers with better knowledge of the subject they teach will likely impact performance of students more than those with little knowledge. The same applies to pedagogical knowledge.

Conclusions

Main Findings
1. Teachers with Bachelor of Science degrees had the deepest subject content knowledge (DSCK) with a mean of 65.42%.
2. Teachers with the most adequate depth of pedagogical knowledge (DPK) were those holding the Bachelor of Science degrees, with a mean of 56.08%.
3. Holders of B.Sc. degrees demonstrated the strongest DSCPK, with a mean of 121.50.
4. Sampled teachers' depth of subject content and pedagogical knowledge significantly predicted their students' performance in examinations.
5. Sampled teachers of English Language were significantly weaker in terms of DPK and DSCPK compared with teachers of Mathematics.
6. Sampled SSII students were generally better in Mathematics than English Language although the difference in their academic performance was not statistically significant.

Implications
The overall mean score of 56.59% in DSCK showed that the sampled teachers were generally weak. Without being strong in this skill, their competence to teach the subject is also affected. Their delivery of instruction to learners may not be sustainable and many times, questions raised by inquisitive and intelligent learners may not be well addressed. To probe deeper into the causes of this low performance may require taking a look at the training received by the teachers in Faculties of Education. What is considered as adequate knowledge in their teaching subjects and courses offered in them must be thoroughly investigated. Knowledge may be taken for granted especially if one had gone through school and had acquired certificates or qualifications as proof.

Also, the finding indicating that the DPK of professionally trained teachers holding B.A. Ed. and B.Sc. Ed. fell close to the mean calls to question what happened to the teachers while in training and after they had been certified. It also calls to question whether they are in position to utilize their professional training while practicing in the school system. If training and skills acquired are inadequate, delivery is weakened even before the product of such institutions begin to work. A national study across many other school subjects should be helpful in determining the validity of the current findings.

Limitations
A preliminary study was embarked upon to achieve the following objectives: identification of the category of teachers (B.Ed. /B.Sc. Ed /B.A.Ed.; PGDE; or B.A. /B.Sc.) that has the deepest DSCK; the most adequate DPK; and the strongest DSCPK. The study also investigated the

predictive ability of teachers' DSCPK for students' performance in English Language and Mathematics. Seventy-eight teachers of Senior Secondary II English Language and Mathematics in thirty-two randomly secondary schools in Kwara State and classes of SSII students taught by the teachers who constituted the sample. Data were collected through tests, observations and vignettes, patterned after Kirschner, Borowski and Fischer (2010) and Baumert et al. (2010); and analysed using descriptive and inferential statistics to compare the teachers' DSCK /DPK/DSCPK in both subjects. Findings of the preliminary investigation showed that teachers with B.Sc. demonstrated the deepest DSCK; the most adequate DPK; and the strongest DSCPK. Findings of the study further indicated that both pedagogical and subject content knowledge of sampled teachers were significant predictors of students' success in examinations; and the two variables accounted for 10.7% of the total variance of students' success in examinations.

However, illuminating as the findings of this study may appear, the fact that it was only a preliminary study, limited in scope and subject coverage, means that no conclusive statements about the findings reported here can be made. Neither can the findings be taken as valid representation of the depth of subject content and pedagogical knowledge of SSII English Language and Mathematics teachers in Nigerian secondary schools. A large-scale national study is therefore imperative.

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Why Is There a Disequilibrium Between Power and Trust in Educational Settings?

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Abstract

The purpose of this paper is to explore the relationship between school administrators' power sources and teachers' organizational trust levels according to the teachers' perceptions. The sample of the study, which employed a survey research method, consisted of 401 school teachers, working in both the private and public sectors in Istanbul, Turkey. One data gathering instrument of the study incorporated the "School Administrators' Organizational Power Sources Scale" developed by Zafer (2008) and the other was the "Organizational Trust Scale" first developed by Daboval, Comish, Swindle and Gaster (1994) and adapted to Turkish by Yılmaz (2005). Descriptive statistics and parametric analysis tests were used to determine the relationship between the power and trust dimensions. According to the research findings a moderately positive relationship was found between power sources except coercive and all organizational trust subscales. There is a positively low level of relationship between coercive power and all organizational trust sub-dimensions. There is a positively moderate relationship between sensitivity to employees and communication environment sub-dimensions of organizational trust and legitimate power, as well as a low positive relationship with openness to innovation and trust to administration subscales. Thus, the results revealed that sub-dimensions of organizational power significantly predicted organizational trust scores.

Keywords: trust, education, power, administration, teacher, leadership

Introduction

Today, increasing technological, economic and political developments make organizational change inevitable, including in educational organizations. During this process of change, the ways in which educational leaders use the power sources they have gain importance.

An education system's ability to fulfil its functions effectively at school level depends on the knowledge and abilities of the school administrator first of all. A head-teacher who can provide this success needs to be well trained in behavioral sciences as well as having knowledge about the concepts and processes related to school management. At this point, educational administration is not only an expertise, but also a combination of personal skills, experiences and knowledge (Nathan, 2013). Within this knowledge and skills, the ability of school administrators to influence the teachers and other staff is very important and illustrates their form of power. Ability to influence with power is one of the basic ways to create behavior change in subordinates and this causes productivity to increase because the essence of the power concept consists of the ability to have control over the behavior of others (Schermerhorn, Hunt & Osborn, 2002). According to Raven and Kruglansky, the concept of power is a form of influence that controls over the conflict and chaos (cited in Benzel, 1983). In this way, the use of power sources is regarded as a factor to reduce mistrust in the chaotic environment of organizations. In this context, the problematic question of this study is; Is there any significant relationship between the power sources used by administrators and the organizational trust that teachers feel in educational organizations?

Educational organizations, like other organizations, should be able to adapt to the ever-changing and evolving conditions. It should be taken into consideration that the power shared by the organization during the modernization of schools is the winning power and that the sharing of power by the administration will create an environment based on trust and synergy (Taymaz, 2005). The concept of trust is a significant influence that increases the level of productivity of educational organizations and basically this concept is the product of a relationship based on honesty and integrity. According to contemporary approaches, the concept of trust is the most fundamental resource for the coordination of individuals who have common goals (Shrum, Chompalov & Genuth, 2001). In terms of organizational trust, it is seen that the variables such as a leader's capabilities, prestige and philanthropy are the basic preconditions for creating an environment based on trust in organizations. Therefore, it is seen that this trust environment influences employees' skills such as creativity and organizational commitment (Tan, H. & Tan, C., 2000). According to the literature, Daboval, Comish, Swindle and Gaster's (1994) Organizational Trust Scale consists of four sub-dimensions of trust: sensitivity towards the employees, trusting to the principal, openness to innovation, and communication environment (as cited in Yılmaz, 2005, see p. 84).

Organizational trust provides positive outputs for the organization and employees directly and indirectly. In the determination of the trust level, one of the important variables is the organizational power sources used by the administrations. Even though there are limited studies which examine the organizational trust perception and organizational power sources relationship effect on educational organizations (Karadag & Bektas, 2013; Altınkurt & Yılmaz, 2011), there have been different studies related to this subject for different professional groups in different organizations (Bachman, 2001). The research is important for explicating the relationship between these two variables (power and trust) in terms of educational organizations. In fact, it is believed that the relationship between the trust

atmosphere, which affects the productivity level of teachers, and the power sources used by administration has an important contribution to the related literature.

Literature Review

According to Weber, power is defined as "the ability of an individual to achieve their own goals or aims when others are trying to stop them from realising them and having influence on others" (as cited in Ordonez Asenjo, 2014, p. 7).

According to the French and Raven, social power in some systems is defined as the maximum potential ability of social agent to influence others and they classified the power in five different categories as legitimate, reward, coercive, expert and referent power sources (1959, p. 261). Even though information power is added as a sixth power source to this classification later on, in some sources it has still been included in the field of expert power (as cited in Goethals, Sorenso & Burns, 2004, p. 210). 'Expert' and "Referent" power sources are related to personal properties of the administrators and expert is based on a person's high levels of skill and knowledge whereas referent is based on a person's perceived attractiveness, worthiness and right to others' respect. The "Legitimate", "Reward" and "Coercive" dimensions are positional power sources and they are defined as: legitimate power source is based on the formal right to make demands, and to expect others to be compliant and obedient, reward power source results from one person's ability to compensate another for compliance, and coercive power source comes from the belief that a person can punish others for noncompliance (Daft & Marcic, 2014, pp. 489–490).

On the other hand, the concept of trust, that is considered to be influenced by power sources, is defined as an attention to the sensitivities of the other side. According to Zucker, it is viewed as a confidence that cannot be harmed or put at risk by the actions of the other party (as cited in Jones & George, 1998, p. 531). In addition, the feeling of trust, which is seen as the most important social capital of school organizations, will lead to a culture shared through the suitable power used by school administrators and this shared culture will contribute to the creation of trust in the staff (Zalabak, Morreale & Hackman, 2010).

There are sub-dimensions of trust defined in the literature. The most common sub-dimensions of trust are defined by Daboval, Comish, Swindle and Gaster (1994). They have come to the conclusion that there are four different sub-dimensions of trust. These sub-dimensions are (as cited in Yılmaz, 2005, p. 54):

- Sensitivity towards the employees: It refers to administrator's understanding and respect of staff. For this sub-dimension, the support of the managers raises staff in terms of productivity and feeling trust.
- Trusting to the principal: It refers to staff's trust of the administrators' fairness and expertness. The emphasis of the administrator is to be generous in sharing information and to develop a sincere and honest relationship with his staff.
- Openness to innovation: It refers to administrator's eagerness and effort in creating effective and positive organizational change and development, thus the environment of trust can easily be created.
- Communication environment: It refers to staff's right to share ideas and feelings for the organization without hesitation and the importance of conveying the information to the employees in a correct and timely manner.

Method

The target population of this study were 4877 primary, middle and high school teachers, working in private and public schools in Eyup/Istanbul and Tuzla/Istanbul during the 2016–2017 academic year. The research sample size can be assessed in an approximate 95 per cent confidence interval for different size of populations and the participant number was determined in accordance with the relating sampling table (Anderson & Olkin, 1994). A total of 4877 teachers should be represented by a sample of 356 participants according to the 95% certainty level. Considering the problems that may be encountered during the completion of questionnaires, 450 questionnaires were distributed of which 401 were returned. The total number of participants according to demographic values is provided in Table 1.

Table 1: The Number of the Questionnaire Respondents

Gender		N	%
	Female	258	54
	Male	183	46
Branch			
	Class	59	15
	Branch	342	85
Seniority			
	0-5 years	170	42
	6-10 years	108	27
	11-15 years	77	19
	16 years and over	46	12
Degree			
	Undergraduate	298	74
	Graduate	103	26
School Type			
	Public	253	63
	Private	143	37
Union Membership			
	Member	167	42
	Non-member	234	58

Of the subjects, 54% of them were female (258 participants) and 46% were Male (183 participants), 15% participant teachers (59) worked in primary schools and 85% participant teachers (342) worked in middle and high schools. As a seniority variable, 42% of them had 0-5 years of experience (108), 27% of them had 6-10 years of experience (108), 19% of them had 11-15 years of experience (77), 12% of them had experience over 16 years (46). Of the subjects, 74% of them had a bachelor degree (298) and 26% of them had a master or PhD degree (103), 63% of them worked in public schools (253) and 37% of them worked in private schools (143), 42% of them had membership in teacher unions (167) and 58% of them did not have membership in teacher unions (234).

One of the data collection instruments used in the research is the "Organizational Power Sources Scale" developed by Zafer (2008) and this scale has five different power sources: expert, referent, reward, legitimate, coercive power. This scale performed well in validity and reliability analysis and as a result of the exploratory factor analysis of the scale, it has been

found that explanation variances of each dimension varied between 53% and 62% whereas Cronbach Alpha coefficients, which were the indicators of reliability, were between .82 and .94.

The other data collection instrument is the Organizational Trust Scale developed by Daboval, Comish, Swindle and Gaster (1994) and adapted to Turkish by Yılmaz (2005) after displaying good validity and reliability and it has four subdimensions: sensitivity towards the employees, trusting to the principal, openness to innovation, communication environment. Total variance explained by the scale is found to be 52%, whereas Cronbach Alpha coefficient is .97.

For this study, data was analyzed by SPSS (23.0 version). In order to determine which statistical techniques should be used to analyze quantitative data, the Shapiro-Wilk H Test was first conducted. As a result of the test, parametric techniques such as Pearson Product-Moment Correlation Analysis were applied during the analysis of data on the normality of research data.

Findings

As a result of the analysis of the data, basic findings were obtained for the problematic situation to be answered. In this context, the mean scores and the standard deviation scores of the teachers' perceptions of sub-dimensions of Trust Scale scores are shown in Table 2.

Table 2: Mean and Standard Deviation Values for Organizational Trust Sub-dimensions

Sub-dimensions	Mean	Standard Deviation
Communication environment	3.53	1.36
Sensitivity towards the employees	3.29	1.25
Trusting to the principal	3.52	1.47
Openness to innovation	3.38	1.02
Total Trust Score	3.42	1.20

As shown in the Table 2, it is seen that the organizational trust levels were perceived in the form of communication environment (X = 3.53), sensitivity towards the employees (X = 3.29), trusting to the principal (X = 3.52), openness to innovation (X = 3.38) and the total trust score (X=3.42). Accordingly, teachers perceive the communication environment sub-dimension as the highest of all.

For this study, according to the participant teachers, the mean and the standard deviation values of the power sources used by the administrators are given in Table 3.

Table 3: Mean and Standard Deviation Values of Power Resources Used by Administrators

Sub-dimensions	Mean	Standard Deviation
Expert Power	3.55	.84
Referent Power	3.43	.94
Reward Power	3.41	.95
Legitimate Power	3.83	.71
Coercive Power	3.53	1.36

According to the perceptions of the teachers, it is seen that the power source used at the highest level is the legitimate power (X = 3.83), then expert power (X = 3.55), coercive force (X = 3.53), referent power (3.43) and the last one is reward power (X = 3.41).

According to the teachers' perceptions; the results of the Pearson Product-Moment Correlation Analysis, conducted to determine the direction and dimension of the relationship between the organizational trust attitude's subdimensions and the power sources used by the administrators are shown in Table 4.

Table 4: Results of Correlation between Organizational Power and Organizational Trust

		Sensitivity towards employees	Trust to principal	Openness to innovation	Communication environment	Total Score of trust	Expert power	Referent power	Reward power	Legitimate power	Coercive power
Sensitivity towards employees	r	1	.838**	.399**	.870**	.952**	.390**	.389**	.388**	.321**	.254**
	p		.000	.000	.000	.000	.000	.000	.000	.000	.000
Trust to principal	r		1	.306**	.924**	.954**	.315**	.287**	.289**	.217**	.086
	p			.000	.000	.000	.000	.000	.000	.000	.087
Openness to innovation	r			1	.304**	.430**	.839**	.914**	.898**	.743**	.538**
	p				.000	.000	.000	.000	.000	.00	.000
Communication environment	r				1	.957**	.341**	.307**	.307**	.285**	.157**
	p					.000	.000	.000	.000	.000	.002
Total score of trust	r					1	.425**	.412**	.411**	.340**	.216**
	p						.000	.000	.000	.000	.00
Expert Power	r						1	.906**	.784**	.783**	.526**
	p							.000	.00	.000	.000
Referent power	r							1	.804**	.763**	.495**
	p								.000	.000	.000
Reward power	r								1	.754**	.495**
	p									.000	.000
Legitimate power	r									1	.665**
	p										.000
Coercive power	r										1
	p										

As shown in Table 4, it is seen that there is a positively moderate relationship between the sensitivity towards employee sub-dimension and the power of expert, referent, reward and legitimate power, while there is a positively low relationship between sensitivity towards the employee's sub-dimension and coercive power. There is a positively moderate relationship

between organizational trust's sub-dimension, trust to principal and expert power and positively low relationship with referent power, reward power, and legitimate power, but no significant relationship with coercive power. Organizational trust's openness to innovation sub-dimension has a positively high level of relationship with expert power, referent power, reward power, legitimate power and coercive power. Organizational trust's communication environment sub-dimension has positively moderate relationship with the expert, referent and reward power sources while it has positively low relationship with legitimate power and coercive power.

When the relationship between organizational trust and power source types is examined separately, it can be said that there is a positively moderate and significant relationship between expert, referent power, reward power and organizational trust total score from the findings; expert power (r = 0.425), referent power (r = 0.412), reward power (r = 0.411), legitimate power (r = 0.340) and coercive power (r = 0.216). Accordingly, it can be said that the effective use of expert, referent and reward power sources increases the level of trust environment in educational organizations. There is a much lower relationship between legitimate power, coercive power and organizational trust in comparison with the other power sources.

Discussion and Conclusion

Today, organizations that are under the influence of globalization need to envisage organizational change and innovation in order to meet growing expectations and make a difference from their competitors in increasingly competitive environments. For organizations that want to keep up with the 21st century conditions, change can sometimes create pressure and stress due to employees' self-renewal and development efforts. This situation which is inevitable for almost all organizations is also valid for educational organizations. Organizations' and schools' complex structures, the problems created by the inability to share corporate resources, differences in worldviews and judgments of values, sense of self or power battles originating from work position, communication problems between employees and their goal differences can create a chaotic and insecure atmosphere in organizations. It is important to work in a peaceful and safe environment between the teachers and the administrators at the point where educational organizations fulfill their goals. Creating this environment of trust is one of the main tasks of the administrators and this is possible with the correct and effective use of the power sources of the ones at the management level of schools.

In the light of these thoughts, the aim of this study was to clarify if there is any significant relationship between the power sources used by administrators and the organizational trust that teachers feel in educational organizations. At this point, it will be a contribution to the related literature area whether the power sources used by school administrators in educational organizations affect the atmosphere of trust affecting teachers and if so, it is also necessary to know the level of this effect. It is also useful to see which power sources influence the trust environment in educational organizations.

According to Kratzer's (1997) research there is a positive relationship between open communication and organizational trust in educational organizations. Also, it has been found that creating a trust environment in schools depends on the teachers' ability to establish clear relationships with each other. As a result of this trust environment, it has been observed that teachers can share their professional secrets with each other, establish their strategies and

fulfill their tasks successfully and can share materials and plans with each other (Kratzer, 1997, p. 26). In a study they conducted together, Jones and George aimed to identify factors that contributed to organizational trust in educational organizations and found that these were the factors of employee qualifications, environment, organizational structure, organizational climate and interpersonal relationships (Jones & George, 1998, pp. 542–543). When the level of organizational trust is examined in this study, it is seen that the average scores of the communication environment are the highest among organizational trusts sub-dimensions score. As a result of this research and on the basis of the study of the literature, it is seen that inter-teacher communication is an important element in providing an environment of trust at schools.

In a study conducted by Sheehan, teachers' feelings of trust toward the school administrator contribute their improving positive attitudes toward the school and their involvement in school management. Also, as a result of the high organizational trust in educational organizations, the teachers' level of risk and initiative taking increases (Sheehan, 1995, pp. 136–137). In this study, feeling trust towards the principal was encountered as an element that increases organizational trust level and it is seen that trust to principal sub-dimension is the most perceived one after the communication environment sub-dimension.

This study, which was conducted in order to determine the relationship between school administrators' power sources and organizational trust according to teacher perceptions in educational organizations, shows that the bureaucratic, decentralized and vertical hierarchical structure of the National Ministry of Education in Turkey has the legitimate power source as the most used by school administrators. School administrators who are responsible for implementing the laws and regulations coming from the Ministry have to develop a law-based management approach to ensure the general operation of schools. Since political interventions are frequently carried out in Turkey through legislation and regulations, it is possible for law enforcement officials to use legitimate power as a way of ensuring that employees adapt to these frequently changing educational policies. Other power sources used by school administrators in this study are respectively expertise, coercive power, referent power and the lowest one is reward power. When the related literature is examined, Altınkurt and his colleagues (2014) conducted empirical studies on power sources used by school administrators in relation to power preferences of school administrators show that according to the teachers' perceptions, school administrators used the legitimate power most of all (Altınkurt, Yılmaz, Erol & Salalı, 2014, p .51). Similarly, Kocabaş (2016), in his master's thesis study, examined the views of teachers about the power sources used by the school administrators. Participant teachers stated that school administrators first received their power source from laws and regulations (Kocabaş, 2016, p. 121). In a study of school administrators' power sources, conducted in Washington State, it has been determined that the most used power sources are referent power and expert power (Benzel, 1983, p. 101).

In another research study, according to Lyons and Murph, when school administrators' experience in the same institution increases, it has become clear that the school administrators use the authority powers (especially the legitimate power), which are more organizationally sourced ones. It has been argued by the researcher that administrators have lost their teaching and learning activity skills as they gain managerial experience and thus have lost the ability to use the expert and referent power sources, which are the ideal power sources for their organizations to achieve their goals (as cited in Tschannen-Moran & Gareis, 2004, pp. 574–575). However, the use of personality powers such as expert and referent plays a more effective role for successful management of schools in the related literature (Benzel,

1983, pp. 7–8). Moreover, as mentioned before, legal regulations in Turkey cause school administrators to use legitimate power more effectively than the usage of referent and expert power.

Based on the results of this study, there is a moderate and positive relationship between organizational trust and expertise, referent, rewarding and legitimate power; there is a low positive relationship between organizational trust and coercive force. Also, a moderate positive relationship between school administrators' power sources and organizational trust, causes the concepts of power and trust to be considered as concepts has similar effects on educational organizations. Similarly, other investigations have shown that organizational power is a concept that greatly affects organizational trust (Bachman, 2001; Altinkurt & Yilmaz, 2011; Karadag & Bektas, 2013).

Considering the effects of organizational trust on the organizational outcomes, the explanatory effect of power sources used by the school administrators should be taken into consideration in a broad sense, that's why it may be useful to carry out more studies in this area in educational organizations.

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Foreign Language Proficiency as an Asset for Japanese Graduates

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Abstract

The present study discusses the findings from a survey of BA students in their 3rd year or higher, as well as MA degree program students, regarding their perception of Western corporate culture and internationalisation in relation to their foreign language major. The students surveyed (n=445) belong to one of 24 different foreign language programs. Besides demographics, the respondents were asked to state their level of agreement or disagreement concerning different scenarios they might expect to encounter during their first full-time position in a corporate firm. Data analyses were conducted with SPSS. A sample of students in non- foreign language majors was used as a control group (n=112). Significant findings are discussed within the theoretical framework of Stakeholder Theory in Education. Foreign language students have a higher perception and understanding of internationalisation than non-foreign language students. A statistical analysis of internationalisation among foreign language students showed the highest correlation for the following factors: *Evaluation of English for Career, Status of Foreign Language,* and *Business Interest*. The findings have a practical implication for human resource managers, as they indicate which type of students have the highest theoretical potential to help a firm striving for greater internationalisation. One limitation of this study is that survey respondents are affiliated with only one university. A future tracer study could test the model to see whether students with the highest level of agreement to internationalisation really are involved after graduation in the internationalisation process of the firms they are affiliated with.

Keywords: human resource management, western corporate culture, internationalisation, stakeholder theory in education, status of foreign language

Introduction

Internationalisation has reached the attention of Japanese stakeholders such as politicians, human resource (HR) managers of multinational corporations [MNCs], as well as smaller organisations, university administrators, students, and consumers. Internationalisation concerns an organisation's internal and external measurements to conduct business and trade. Stakeholder groups affect each other in terms of opportunities and actions regarding internationalisation. For example, a weak economy renders negative repercussions for society, manifesting as growing hardships for constituents, for example increasingly fragile infrastructure. Similarly, in an underperforming education sector, underachieving graduates failing to conform to market demands inflict negative consequences upon society. Such negative factors are currently compounded by a rapidly aging Japanese society, a low birth rate, a shrinking domestic market, increasing competition from foreign markets, and resistance to integration and migration (Sekiguchi, Froese, & Iguchi, 2016).

To provide a sustainable economic framework, bureaucrats are dependent on the performance of the industrial sector and educational institutions (Lilles & Rõigas, 2017). Within education, universities secure more funds via government or industry grants in a flourishing economic environment. In return, universities can provide better education, teaching, and research outputs. HR managers subsequently rely on graduates with a high potential to contribute to their organisations' internationalisation and increased profitability.

Embracing English language proficiency in human resource management (HRM) often becomes synonymous with internationalisation. However, graduates must achieve proficiency before they enter the job market. In Japan, learning techniques, teaching methods, and educational outcomes remain varied, and English language proficiency is below the international average. For example, a report shows Japan ranking 40th from 46 countries in mean total scores for listening and reading (2015 Report on Test Takers Worldwide. The TOEIC Listening and Reading Test, 2017). Japan remains a monolingual country, principally due to the homogeneous nature of society. However, some companies (e.g., Rakuten, Nippon Sheet Glass, Nissan) have promoted "Englishization" to make English the corporate language. This is longstanding accepted practice for many foreign MNCs supporting a crucial internationalisation strategy and contributing to a "modern" corporate culture. The rationale for this change, in particular for MNCs, relates to the need for a more competitive business model to address ongoing concerns (Bartlett & Ghoshal, 1989; Sekiguchi et al., 2016). For this research purpose we, therefore, consider besides internationalisation also Western corporate culture as an important depending variable. MNCs have conducted significant research into internationalisation, although a gap remains between perceptions of current students concerning internationalisation and expectations of organisations seeking their talents. Investigation is required to understand how FL majors may make significant contributions to internationalisation goals.

Academics have also addressed the need for internationalisation in the university environment (Arimoto, Cummings, Huang, & Shin, 2015). In this respect, internationalisation has other implications, depending upon whether it is applied to individual fields of study or to a university-wide curriculum and administrative structure. In the case of foreign language (FL) programs, the primary goals consist of improving language proficiency whilst developing cultural intelligence (CQ). The success of such programs in executing the latter impacts upon the level of internationalisation. However, the strong focus of previous research is upon scholars and academics, whilst largely neglecting students as stakeholders. By

considering students and identifying which factors are correlated with a positive perception of internationalisation, this study aims to fill the practical gap for HR managers. Thereby, educational solutions can contribute significantly to the debate upon Japanese internationalisation strategies and FL proficiency.

This paper addresses the following research questions:

1. What are the perceptions of FL students regarding Western corporate culture and internationalisation in comparison with their peers in non-FL majors?
2. What effect do features of FL major students and programs (study abroad experience, the status of the language, personal interest in the FL, future outlook, and perception of utility) have on the scores for Western corporate culture and internationalisation?

Literature Review

The research review focuses on internationalisation and its chosen predictors, career choice, FL education, and Stakeholder Theory in education.

Internationalisation and its Chosen Predictors

Arimoto et al. (2015) detailed the changing Japanese academic profession. Various authors considered the phenomenon of "change" due to demographic factors, and a realignment of stakeholder relationships. These discussions concern a 1992 survey, repeated in 2007.[1] Huang (2015) points out that by 2007 more than 70% of faculty members in both national and private universities rejected the necessity for a fresh impetus to internationalise their university curriculums. Within the changing university environment, institutions have moved from catering exclusively to society's higher echelons to achieving universal provision of higher education, stimulated by a shrinking population. Superfluous capacity ensures that applicants achieving the minimum entrance requirement can find a place. This will impact upon teaching quality due to varying levels of student readiness to embark upon higher education programs. Private universities and those in rural areas must cope with these issues sooner than National Universities and institutions with a prestigious reputation. Arimoto et al. (2015) conclude that internationalisation of Japanese university research and education-related activities has improved since 2000. However, awareness of internationalisation over the same time period has not kept pace. Arimoto et al. (2015) suggest there may be negative associations among Japanese university educators regarding internationalisation.

Academics also emphasise the need for change in the Japanese economy and point to the pressure many firms face from globalisation (Lippert & Kenichi, 2015; Lippert, 2016; Yamao & Sekiguchi, 2015). Such research provides a comprehensive overview of companies' internationalisation strategies and resulting issues concerning staff demotivation. For Lippert and Kenichi (2015), hesitation paired with resistance to change is traceable to the *Kaisha*-company mind-set rooted in a high-context culture with unwritten rules. It therefore becomes a barrier to successfully adapting to internationalisation. Today, the *Kaisha*-mind-set, which helped Japanese growth during the 1960s and 1970s is, for Lippert (2016), often no longer appropriate. According to Lippert and Kenichi (2015), hesitation over sending employees abroad stems from inadequate FL proficiency and consequent low CQ.

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[1] The First International Survey of the Academic Profession in 1992, sponsored by the Carnegie Foundation for the Advancement of Teaching in the United States and including 14 countries. Arimoto along with Futau conducted a similar survey in 2007.

To fill the practical and academic gap and consider why many firms still follow traditional routes by relying upon the local market, Yamao and Sekiguchi (2015) measured the impact on "change" and "progress" with English as an organisation's internationalisation language. Whilst the authors assume that English-speaking employees have the potential to support internationalisation, their findings illustrated difficulties for non-Anglophonic countries, in particular Japan, in switching to English. Such development can change the power relationship within an organisation by severely affecting the authoritative hierarchy and, consequently, the *Kaisha*-mind-set. HRM practitioners and academics see this as one of the major barriers to effective Japanese internationalisation. Building on insights provided by this research, the question is raised: how can CQ skills and assets of FL graduates contribute to solve such dilemmas?

Career Choice
Regarding the age factor, Humburg (2017), like Lee and Ohtake (2014), investigates career choice using the BIG 5 characteristics. He argued that assessing behavioural characteristics of 14 year-olds permits comparison with the subsequent choice of subject studied, as personality has yet to be influenced by pursuing a particular field of study, for example through either peer pressure or stricter adherence to stereotypes. Therefore age, as an influencing factor that shapes undergraduates' perceptions of corporate culture and internationalisation, is considered as they advance in the curriculum and age is included as a control variable.

Schaar, Selke, Ang, & Ogasa (2015) investigated career choice, and a tracer study examined career paths of FL graduates in a Malaysian-German BA program. The survey questioned curriculum improvement and established that graduates sought additional courses with "real life" relevance (e.g., business aspects). The possibility exists to conceptually develop the study by including "business as personal interest in language" as an indicator for career success, or at this stage, as a marker for greater aptitude for internationalisation. The tracer study also revealed that lifelong learning and in particular further studies in Master or MBA, which are providing additional international flair and knowledge for the learners, have a positive impact on income and career development.

Foreign Language Education
In the *English Education Reform Plan Corresponding to Globalization* (MEXT, 2013), Japanese policy makers outlined steps for improving English as a FL education program in the public school system. This was a galvanized response to globalisation and indicates policy makers' underlying assumption that English and FL proficiency contribute to economic development. Japan remaining a monolingual society questions past measures aimed at improving English proficiency, such as the Japan Exchange and Teaching program. The *English Education Reform Plan* is not immune to criticism (e.g., Kobayashi, 2013), discussion of low English proficiency relating to Japanese economic performance from 1970 to 2012. A key organisational concern is that Japanese graduates are becoming less inclined to work overseas. Many Japanese companies seek foreign talent that can help them cope with globalisation challenges. However, Japanese graduate FL skills are not readily utilised and are not viewed as an asset. This approach, which ignores FL skills as a career enhancer and includes a male gender bias for managerial promotion, is ultimately detrimental. Female employees with high FL proficiency experience find difficulty in achieving appropriate peer

recognition, (Kobayashi, 2013). Therefore, Kobayashi's paper is highly relevant to the research project as female students achieve higher FL grades.[2]

Scholars have called for analyses of English education within a broader framework of policy, politics and ideology (Kobayashi, 2013; Morizumi, 2016). To establish a balance between progressive and conservative thinking among policy makers, Morizumi (2016) notes that improving English proficiency is paired with the affirmation of Japanese identity in English education. However, for Kobayashi (2013), recent efforts in expanding English education are too late. Such Japanese academic opinions concerning language education highlights the problematic Japanese mind-set regarding English.

The literature also indicates mounting pressure upon previously important foreign languages in Japan. Schöningh (2015) discussed the shift in language policy and interest in Japan for German, traditionally the second most-studied FL in terms of numbers after English. Other studies support this pessimistic analysis and demand a modernized curriculum, (which corresponds with students' aspirations in Schaar's et al. (2015) findings). For example, Chinese has become more prominent, and some companies established special training programs within their headquarters (Nakamura, 2016). Therefore, it is relevant to include FL status within this study, and to raise the question: does a role remain for shrinking foreign languages in the changing Japanese university environment?

Stakeholder Theory in Education
Stakeholder Theory has received, since its introduction by Freeman in 1984, more attention (Freeman, 1984; Freeman, Harrison, & Wicks, 2010). One of the main misunderstandings with this theory is often its mixing up with corporate social responsibility due to its aversive concept against shareholders' wealth maximization. The theory explains that an organisation's success and survivability depends upon its capability to satisfy both its economic and non-economic objectives. Therefore, the concept is applicable in the university performance context. A university which does not serve the needs of society fails to succeed in its reason for being in business. Upon implementation of the *National University Incorporation Law* in 2004, Japanese national universities, which were formerly government controlled, became "national university corporations". A primary legislative goal was to make universities more responsive to society's needs in an increasingly competitive and globalised age. Understandably, stakeholder management plays a crucial role in the operation of higher education institutions, as multiple stakeholder groups and their attendant aspirations require close monitoring, plus inclusion in decision making processes (e.g., curriculum design, evaluation, and internationalisation). The extent to which implementation of stakeholder management has been successful remains underexplored. Woolgar (2007) investigated university-industry linkages after the 2004 law. He measured how industry generated income varied depending upon university staff competency. One finding was that universities often failed to provide graduates with industry required skills, despite this being a legislative driving rationale. The phenomenon of changing expectations within higher education, and sometimes the failure of institutions to meet such expectations, is not peculiar to Japan. In many countries, universities previously under government control are facing mounting pressure due to a growing awareness of stakeholder management and expectations of greater commitment to people and society (Mampaey & Huisman, 2015). Murasawa's

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[2] Tollefson (2016) discusses the language policy direction for Japan in another direction, i.e. foreign workers in the care and health sectors. It could be investigated how Japanese foreign language graduates benefit from the presence of such foreign language speakers, (e.g., Tagalog and Bahasa Indonesia) in internal internationalization.

(2015) analysis of academic professions reaches similar conclusions concerning stakeholder responsibility. With decreased governmental oversight, universities attempt to accomplish effective staff evaluation, partially by setting individual Key Performance Indices. Hammond (2016) suggests that pressure on higher education staff is rooted in the effort to remain internationally competitive in response to economic globalisation, which is linked back to Stakeholder Theory. For Murasawa (2015), the absence of significant results is not surprising when analysing the impact of evaluation on research input, such as grants, and output, such as publications and patents, and on teaching orientation. The incorporation of national universities and its consequences for university management exhibits parallels to tensions between eastern and western work culture in some Japanese companies. For example, age-based remuneration may be favoured over western pay-by-merit, and perceived as a better incentive. Similarly, notions of responsibility in Japanese firms often differ from western standards (Takahashi, 2004; Todeschini, 2011). These findings relate to the present research, as they indicate further risk of conflict within internationalisation.

Western corporate culture

Organisational corporate culture serves to maintain integrity within company subsidiaries. In a 1968 study, repeated in 1972, Hofstede, G., Hofstede, G., & Minkov (2010) explore differences in national cultures and consequent divergent views upon management in 72 countries within one MNC (IBM). Such differences are predicated upon deeply-rooted values and traditions of respective cultures. Managers' and employees' values shape their expectations of how companies should be managed and how relationships between individual members should be defined. Fukuyama, (1996) and Trompenaars and Hampden-Turner (2012) further developed cultural diversity by demonstrating that Japanese HRM practices are fundamentally different to those of companies originating or operating in North American and European cultures (Kopp, 1994). For example, they claim that organisations with rigid hierarchies survive best under stable conditions. In turbulent times, as Japan is currently experiencing, organisations with flat hierarchies cope more effectively. They believe that failure to address causes of counterproductive trends before their effects appear can prove detrimental to organisations and their entrenched cultures. Western corporate culture is fundamentally different from that in Japan. Based upon required HRM practice change illustrated above, acceptance of Western corporate culture was measured as an indicator of students' potential to support internationalisation. However, the feasibility of alternative approaches is acknowledged, for example measuring willingness to adopt Chinese corporate culture, with its heavy governmental and political influence as an indicator of potential to contribute to internationalisation.

Internationalisation

No common definition of internationalisation exists. Dülfer and Jöstingmeier (2008) define it as the process of export, licensing or overseas direct investment. Perlitz (2004) considers internationalisation as a phenomenon encompassing various aspects of commercial enterprise such as products, customers, and employees. Within Japanese HRM, both internal and external internationalisation are demarcated. Yoshihara (2005) describes internal internationalisation as foreign employee involvement in headquarters decision making. Alternatively, external internationalisation concerns all aspects of MNCs operating overseas, which is achieved through either localisation, such as employing host country nationals to manage Japanese MNC subsidiaries, or globalisation, providing fair and equal promotional opportunities regardless of nationality. Both strategies achieve greater internationalisation by either increasing local responsiveness or promoting global integration (Bartlett & Ghoshal, 1989). In this study the term is used to refer to both internal and external internationalisation.

Status of a foreign language

Languages are normally grouped by measuring either the number of native speakers or the economic strength of the countries where they are spoken. Linguists divide languages into broad categories: "growing" and "shrinking" or "big" and "small" (Ammon, 2015; Swann de, 2001). In this study, languages are categorised as either "growing" or "shrinking" according to the number of current native speakers. Growing languages include English, Arabic, Chinese, Spanish, Bahasa Indonesia, Hindi, and Farsi, and shrinking languages include German, French, and Danish.

Based upon impediments discussed above, raised issues, previous findings, and gaps in the research, the following hypotheses are developed:

H1a: Japanese FL major students are more likely to accept Western corporate culture than their peers in non-FL majors.

H1b: Japanese FL major students are more likely to accept tasks and efforts related to internationalisation than their peers in non-FL majors.

H2a: Factors related to features of the FL (overseas study experience, language status, personal interest in FL, future outlook, and perception of utility) have a positive correlation with scores of readiness for Western corporate culture.

H2b: Factors related to features of the FL (overseas study experience, language status, personal interest in FL, future outlook, and perception of utility) have a positive correlation with scores of readiness for internationalisation.
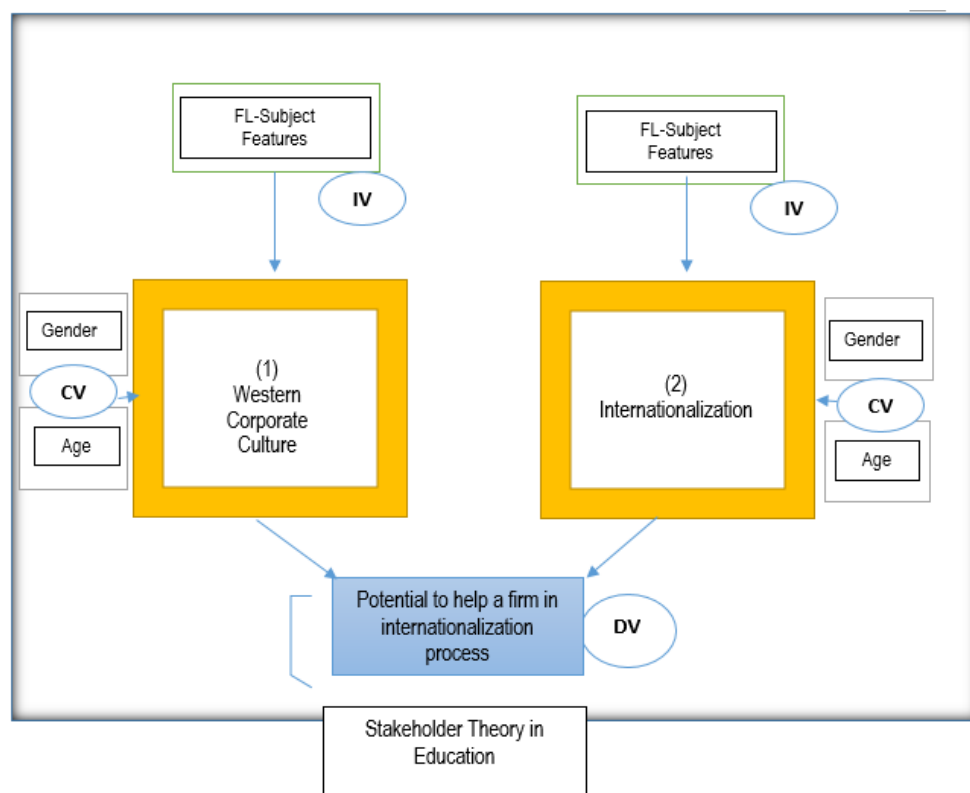

Figure 1: Theoretical Framework

Independent Variables (IV): (1) personal interest in FL major, (2) overseas study, (3) future outlook, and (4) perception of the utility of English/FL
Control Variables (CV): (1) Gender, (2) Age
Dependent Variables (DV): (1) Western corporate culture, (2) Internationalisation

Methodology

The selected target population were undergraduate students from Osaka University in the 3rd, 4th, or higher years (as well as several MA students). The sampling was made from all students by individual approach in public places like the library, canteen, waiting lounge and by asking co-academics to distribute the questionnaire before or after class. The School of Foreign Studies at Minō campus (headed by the Graduate School of Language and Culture) offers BA programmes in 24 FLs to approximately 3,000 students.[3] Osaka University School of Foreign Studies offers the most comprehensive Japanese FL programme after Tokyo University of Foreign Studies.

To understand attitudes towards Western corporate culture and internationalisation, a previously tested questionnaire was adopted and modified for use in the Japanese context. Herstatt et al. (2007) developed a tool to measure the potential for international marketing in small and medium sized German companies. Their questionnaires target managers and employees. Part 1 issues were chosen to measure the socio-cultural gap within companies. The questions in the original questionnaire described typical scenarios within the concept of Western corporate culture such as directness of addressing issues to superiors. As Japanese adoption of Western corporate culture presents a potential conflict due to clashes with Japanese traditional management styles on several fronts, many of the topics used were applicable to the research questions. Responses to Part 2 are important indicators regarding internationalisation. The questions in the original questionnaire were very similar and meant to measure the capability of a firm to adopt to international assignments. Both were amended and extended, and the 1 to 5 point Likert Scale was extended to 9 points to permit greater variance. Responses were translated from German into Japanese and back by two separate individuals. The anonymous questionnaire was in three parts: (I) demographics, including respondents' expectations of FL future requirements (Q1–Q9); (II) items regarding Western corporate culture (Q10.1–Q10.7) internationalisation (Q11.1–Q11.11); (III) general items regarding job seeking strategies (Q12–Q21). The questionnaire included a concluding qualitative statement which respondents were to complete, "*I study my foreign language major because . . .*" Respondents could also provide their contact detail for consideration as participants in a further research focus group. The same procedure was applied in the non-FL major control group questionnaire.

In the first stage of analyses we gathered demographic data, followed by a comparison of foreign language versus non-foreign language students' perception towards Western corporate culture (Model 1, Table 2) and internationalisation (Model 2, Table 2). In the second analyses we than compared FL students' perception towards Western corporate culture and internationalisation according to the status of the FL (Table 3). The variables of interest were: overseas study, business interest, status of FL, English for career, gender, and age. Finally we conducted a qualitative analysis and did a frequency count on field of interest in the studied FL (Table 4) to support our possible findings and recommendations.

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[3] FLs offered are English, Arabic, Bahasa Indonesia, Farsi, Urdu, Swahili, Hindi, Chinese Mandarin, Burmese, German, French, Spanish, Hungarian, Italian, Portuguese, Danish, Swedish, Russian, Korean, Thai, Vietnamese, Mongolian, Tagalog, and Turkish.

Data Analyses

Data were collected at Minō and Toyonaka campuses of Osaka University in July 2016 with assistance from Japanese and foreign academic staff, plus supporting students who received compensation. The response rate was over 90% both for FL major respondents (n=445) and the control group of non-FL major respondents (n=112).

Table 1: Foreign Language Major, (+) growing (-) shrinking, responses for all 24 FL majors in total number and percentage (n=557), with control group of non-FL majors (n=112)

	Frequency	Percent	Valid Percent	Cumulative Percent
English (+)	51	9.2	9.2	
Arabic (+)	14	2.5	2.5	11.7
Bahasa Indonesia (+)	15	2.7	2.7	14.4
Farsi (+)	22	3.9	3.9	18.3
Urdu (+)	14	2.5	2.5	20.8
Swahili (+)	9	1.6	1.6	22.4
Hindi (+)	16	2.9	2.9	25.3
Chinese (+)	20	3.6	3.6	28.9
Burmese (-)	27	4.8	4.8	33.8
German (-)	42	7.5	7.5	41.3
French (-)	6	1.1	1.1	42.4
Spanish (+)	32	5.7	5.7	48.1
Hungarian (-)	10	1.8	1.8	49.9
Italian (-)	22	3.9	3.9	53.9
Portuguese (+)	3	.5	.5	54.4
Danish (-)	10	1.8	1.8	56.2
Swedish (-)	15	2.7	2.7	58.9
Russian (-)	17	3.1	3.1	61.9
Korean (-)	12	2.2	2.2	64.1
Thai (-)	11	2.0	2.0	66.1
Vietnamese (-)	18	3.2	3.2	69.3
Mongolian (-)	18	3.2	3.2	72.5
Tagalog (-)	19	3.4	3.4	75.9
Turkish (-)	22	3.9	3.9	79.9
Non- FL Major	112	20.1	20.1	100.0
Total	557	100.0	100.0	

Cronbach's Alpha (CA) tests for datasets dealing with Western corporate culture (Q10.1 - 10.7) and internationalisation (Q11.1 - Q11.11) were .790 and .847, respectively. One item targeting internationalisation, Q11.9, was removed as it was negatively correlated or near zero with other Q11 components; this improved CA to .888.

Test of Hypotheses 1a and 1b

Testing Hypotheses 1a and 1b, t-tests was performed on the means for Western corporate culture and internationalisation for FL majors and non-FL majors, shown in Table 2.

Table 2: Means Comparison between FL Majors and Non-FL majors

| | Model 1 (Q10) | | Model 2 (Q11) | |
Major	N	Mean (S.D.)	N	Mean (S.D.)
FL majors	442	41.97 (7.96)	441	60.79 (12.79)
Non-majors	112	41.76 (8.37)	104	50.88 (13.82)
t-scores		.241		7.00***

*$p<0.10$; **$p<0.05$; ***$p<0.01$

For comparison of means of perception of Western corporate culture, there is no significant statistical difference between FL majors and non-FL majors. FL majors do not score on average significantly higher on issues in Q10 (Western corporate culture) and the t-test (.241) fails to reject the null hypothesis. However, the mean for FL majors is almost ten points higher for Q11 (internationalisation), and the difference is statistically significant (t=7.00). With regard to Q11, Q11.2 was not distributed to non-majors (in addition to Q11.9) as it pertained exclusively to language utilisation. This test confirms support for Hypothesis 1b; Japanese FL major students are more likely to accept tasks and efforts related to internationalisation than their peers in non-FL majors. However, the test does not support Hypothesis 1a; Japanese FL major students are more likely to accept Western corporate culture than their peers in non-FL majors.

Test of Hypotheses 2a and 2b

To test Hypotheses 2a and 2b, an OLS regression was performed for FL major students using the dependent variables Q10 (Western corporate culture) and Q11 (internationalisation), plus independent variables Overseas Study, Business Interest, Status of FL, and Utility of English for Career. As control variables, Age and Gender were used as in Table 3.

Table 3: OLS Regression of Q10 & Q11 on the Independent Variables

| Independent Variables | Model 1 (Q10) | Model 2 (Q11) |
	Unstandardized/Standardized Coeff. (St Error)	
Overseas Study	-.013 / -.001 (.82)	2.972 / .107 (1.21)**
Business Interest	2.805 / .161 (.79)***	6.596 / .231 (1.17)***
Status of FL	-1.558 / -.092 (.76)**	-2.597 / -.094 (1.12)**
English for Career	1.475 / .223 (.30)***	4.254 / .392 (.44)***
Gender	-1.803 / -.105 (.78)**	-2.811 / -.099 (1.16)**
Age	1.556 / .227 (.33)***	1.916 / .170 (.49)***
Constant	31.66 (3.08)	32.565 (4.58)
F	13.72***	32.76***
Pearson's R	.400	.559
R Squared	.160	.313
Adjusted R Squared	.148	.303

*$p<0.10$; **$p<0.05$; ***$p<0.01$

The regression models in Table 3 indicate convincing results. Test of Hypothesis 2a is represented by Model 1, the regression of acceptance of Western Corporate Culture (Q10) into independent variables. The model is statistically significant (*F*=13.72) with a strong positive correlation of .400. All independent variables are statistically significant at least at the 5% level except for Overseas Study, a dichotomous variable (0=no, 1=yes). The coefficients for Business Interest and Utility of English for Career (the perception that English is important for career development) are both positive, which indicates that the more highly held beliefs resulted in higher acceptance of Western Corporate Culture. Status of Foreign Language (coded as 1=shrinking, 2=growing) has a negative coefficient, which results in those studying shrinking languages scoring higher on acceptance of Western Corporate Culture.

Of the two demographic variables, Age and Gender (coded as 1=male, 2=female), Age performs as expected, with older students more readily accepting Western Corporate Culture. For Gender, coding orientation and the negative coefficient indicates that male respondents more readily accept Western Corporate Culture.

For Model 2, Hypothesis 2b was tested with a regression of acceptance of Internationalisation on the same independent variables. The model is also statistically significant (F=32.76) with a strong, positive correlation of .559. Unlike Model 1, Overseas Study is statistically significant, and all independent variables are statistically significant at least at the 5% level.

The coefficients for Business Interest and Utility of English for Career are both positive, which indicates that respondents with higher scores will also do so on acceptance of Western Corporate Culture. Status of Foreign Language has a negative coefficient, signifying that students studying shrinking languages score higher on Internationalisation. The demographic variables have matching sign coefficients to Model 1, leading to corresponding interpretations for Model 2: male students score higher on acceptance of Internationalisation, as do older students.

The last analysis was regarding interest in the studied language. The qualitative results were twice re-coded and show that fields of interest are generally more focused on utilization of FL skills in the business world outside academia (Table 4).

Table 4: Q20 "I study my foreign language because . . ."

Re-code 1		Re-code 2	
Key words	Counted numbers	Key words	Counted numbers
personal interest	70	culture	99
intercultural interest	68	personal interest	89
career	38	career	79
communication	25	knowledge	40
degree	22	language	40
knowledge	21	communication	23
opportunities	14	education	22
geopolitics	14	study and research	20
business	9	business	17
language	9	linguistics	7
linguistic	2	history	7
art/culture	3	international relations	4
		literature	3
		job hunting	3
		work	2
		arts	2
		politics, economy	2
		music, graduation, grammar, UN, hobby, travel, translation, globalisation, fun	1 each

Discussion of Findings

Responses have been provided to the two questions formulated in the literature review: (1) how can the CQ skills and assets of FL graduates contribute to internationalisation?; (2) does a role remain for shrinking foreign languages in the changing Japanese university environment? Research findings associated with questions and hypotheses are detailed below.

The Importance of the Studied Subject (RQ1)
The analyses (Table 2) indicate significant difference in the perception and understanding of internationalisation between two groups of respondents, i.e. FL majors (n=445) and non-FL majors (n=112). As indicated above, internationalisation is often considered synonymous with English biased foreign language proficiency in relatively monolingual Japan. The findings illustrate the relationship between FL proficiency and the potential to support an organisation in achieving internationalisation, (H1b was supported). These findings suggest that organisations may benefit from language and CQ assets offered by FL graduates. The successful comparison of the two student groups makes the discussion of other findings meaningful. Contrary to expectations, the results for perception of Western corporate culture were not significant and thus H1a was not supported.

The unequivocal consensus that English is key to future careers supports the current research debate surrounding Japanese university English language education from the perspective of ELF and global business education (Terauchi & Araki, 2016).

Features of Foreign Languages (RQ2)
The regression models for Western Corporate Culture and Internationalisation are significant (Table 3). Only a minor difference between the two with respect to overseas study. The initial objective was to test whether the changing status of FL has an impact on either of these variables. It was established that students of shrinking languages score higher on acceptance of Western Corporate Culture and Internationalisation (H2a and H2b). Students of growing languages may consider it less important to exhibit flexibility, as many are from "privileged" languages and principally focus on their studied language. Shrinking language learners may inherit a more flexible and pragmatic approach to challenging circumstances due to either a shrinking population or an increasing dominance of English.

Respondents may also consider the economic strength of the locations in which their FL is spoken when responding to questions concerning their potential future career. Countries such as Germany and Italy, with a higher GDP than all Arabic countries, offer improved financial security and a stable economy in which students can rely on a fare market with law and order. Students having completed study abroad time in those Western countries may have a better positive opinion. In addition, potentially improved trade with richer countries may induce a superficial sense of security and make internationalisation less attractive. Further to Nakamura's (2016) description of Chinese and Russian FL training programs in Japanese companies, it can be added that FL speakers possess the requisite CQ in addition to linguistic proficiency.

Students ranking business of significant interest within the FL curriculum also have higher age and overseas study experience, (control variables), and therefore greater acceptance of internationalisation. Future implications suggest that increased emphasis should be placed on business-related courses within FL curricula. If appropriate, the established English for Special Purposes approach could be modified for other FLs. In Japan, Western European languages, such as German or French, were held in high esteem, and their status only declined over the last 15 years as English, Chinese and Korean gained popularity. The focus upon learning German, for example, is under mounting pressure both from competing languages and students' subliminal disinclination to study traditional and less admired subjects (e.g., literature and linguistics) (Table 4). In considering keywords extracted from the questionnaire qualitative question, it becomes apparent that career and personal interest are among the main drivers motivating students' choice of foreign language major. In post-hoc e-mail discussion with respondents who had expressed interest in participating in a focus group, the meaning of their statements was queried, although only two responses were received.

The former Head of the Tokyo, Goethe-Institut Language Section requested consideration to reinvigorate the attractiveness that initially drew students to these languages, (Schöningh, 2015). However, FLs such as Chinese and Spanish may simply adjust their curriculums due to a weaker focus on one particular field because of the relatively short time during which these languages have experienced growing interest. This has resulted in a less developed network of subject experts and less powerful organisations that favour traditional language teaching, such as the grammar translation method which remains common in Japan.

Overseas study features of the foreign language programs and significantly impacts upon acceptance scores for internationalisation. Understandably, Japanese students who have studied abroad have gained greater exposure to environments away from home. However, Japan is experiencing a reverse trend whereby less able students are willing to study overseas,

which has a consequent negative impact upon the internationalisation of Japanese companies. As Kobayashi (2013) and Lippert and Kenichi (2015) indicate, Japanese corporations hire more foreign graduates and experts as their Japanese counterparts are less amenable to accept burdensome foreign assignments. There is a consequent future risk that fewer ambitious and foreign trained Japanese graduates will be available to support organisations' internationalisation processes.

Recommendations and Implications

From the findings and literature review we can see that in theory Japanese foreign language students have a good understanding of internationalisation and possess a high potential to give firms aiming for expanding business abroad more strength. The Japanese economy needs such fresh spirit to maintain competiveness. In a broader context, university boards of other Asian countries can learn from this paper that it is advisable to increase and strengthening international exchange programs. The findings deliver new arguments to negotiate for more funds and scholarship initiatives for students willing to study abroad. Another aspect of general application is the future strategy should become the possible inauguration of new foreign language programs versus maintaining those of erroneous, less, or shrinking importance. Internationalisation is still probably best learnt in fully developed market economies with less constraints by political or religious turmoil. Hence, countries like Denmark, Germany or France are still valid players in the global economy.

Regarding the academic gap, issues concerning changes in university operational processes are mentioned above (Mampaey & Huisman, 2015). As Japanese universities are now compelled to focus on key stakeholders needs, including students and labour markets, the findings can assist decision makers to improve their university's role society by updating FL curricula to meet society's changing needs.

Limitations

Samples consisted of respondents from a single university, and respondents' answers are self-proclaimed. Another possible limitation concerns social pressure respondents felt to rate certain items as important or to appear open to internationalisation. For example, due to pervasive rhetoric within government policy, university mission statements espouse commitment to such ideals. In addition, respondents may have grouped the FL status according the economic strength of the locations rather than the number of native speakers. Conducting a similar survey, including additional universities with foreign language majors in order to achieve a larger sample, is an option that would test and validate the model. Most importantly, a tracer study of FL graduates should reveal if the model is consistent with the reality of Japanese professional life.

Acknowledgment

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