Comparative Culture

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Active Learning and Students' Perceptions of its Effectiveness to Improve English Skills

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Abstract: Active Learning (AL) has attracted considerable attention in Japanese higher education in recent years. By requiring active student participation in classrooms, it can maximize student classroom engagement, leading to better educational outcomes. AL has been incorporated into classrooms at Miyazaki International College (MIC) since its establishment in 1994. However, it remained unknown what types of AL had been employed and how effective they were. Two surveys were administered to investigate faculty use of AL and students' perceptions about its effectiveness on English skills. In this paper, the results from two surveys are summarized to identify important characteristics of AL use at MIC. Then, it discusses how effective students perceived a wide range of AL teaching strategies to be. Based on the findings, this paper suggests "best AL practices" to improve English skills.

Keywords: Active Learning; Acceleration Program for University Education Rebuilding; Teaching Strategies; Higher Education；English Skills.

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Introduction

Active Learning and Educational Policy of Japan

With the recent rapid expansion of technology and globalization, and issues relatively specific to Japan, such as an aging population and declining birthrate, Japan faces various obstacles to prospering as a country (the Japanese Central Council, 2018). In such an unpredictable era, demands from Japanese society have changed; it is important for Japanese individuals to acquire capabilities to meet the societal demands and keep up with those changes. Without such capabilities, Japan will not be able to prosper in this difficult era and contribute to a global community. Considering the importance of the role that higher education can assume in responding to social needs of human resources in the Japanese society, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has put forth educational policies that encourage institutions of higher education to prepare their students to meet these societal needs. In 2012, the Japanese Central Council for Education issued a report titled "Towards a Qualitative Transformation of University Education for Building a New Future - Universities Fostering Lifelong Learning and the Ability to Think Independently and Proactively" (MEXT, 2012), emphasizing the shift to learner-oriented education. It also highlighted the importance of active learning (AL) for the qualitative transformation required for the desired undergraduate education, contributing to the needs of society. AL is considered important in higher education in other countries as well. For instance, the European University Association (2019) points out AL in higher education as an effective way to foster student skills needed for society and their future employers. AL can effectively engage students in the learning process by increasing student involvement in class activities. By maximizing student class engagement through AL, it becomes possible to foster students' capabilities to successfully manage their future work in this rapidly changing society. Additionally, viewing AL as an essential component of higher education, MEXT (2014) started a funded project to advance AL in higher education.

Definitions of Active Learning

With the Japanese government push towards AL with its funded program, AL has become a trend in Japanese higher education in recent years. According to a report from Benesse (2017), a number of courses in which AL has been incorporated is on a rise. However, there

is no agreed-upon definition of AL. Bonwell and Eison, prominent scholars in AL, define AL as "anything that involves students in doing things and thinking about the things they are doing (1991, p.19)", with several main characteristics such as student involvement beyond listening, more emphasis on developing students' skills than transmitting information, increased student engagement in educational activities, and greater emphasis on their exploration of their own attitudes and values. MEXT (2012) describes AL as teaching techniques or pedagogies that promote active student participation, which is different entirely from one-way lectures. The purpose of AL is to maximize student learning and develop cognitive, ethical, and social skills that can be applied in various dimensions of life. Such AL teaching strategies include, but are not limited to, classroom activities such as discussions, debates, and group work, and experience-based learning such as internships.

Mizoguchi (2014) emphasizes student involvement in AL processes, such as writing, speaking and presenting, claiming that AL should ensure the students' expression of their cognitive processes. Matsushita (2015) claims that the focus of AL should not be on how active students look, but on how deep their involvement and their cognitive process become. Like Mizoguchi, she puts an emphasis on cognitive skills that can be fostered as a result of deep student engagement with class activities through AL. Summarizing viewpoints of different prominent scholars in AL, AL can occur both inside and outside classrooms with various educational activities. In classrooms, specific AL teaching techniques, such as group work, discussions, and presentation, may be used. Outside classrooms, experience-based learning such as internships and community-based projects can become a form of AL. However, prominent scholars suggest that the focus of AL should not be on its different forms, but on the cognitive processes occurring as a result of AL. Various studies demonstrated that AL can yield positive students learning outcomes (Freeman et. al, 2014). For instance, Anderson et al (2005) showed that AL, compared with lecture-based learning, can increase content knowledge, and develop critical thinking and problem-solving skills in undergraduate education. Therefore, in investigating AL, it is crucial to examine not only its different forms but also its educational outcomes.

Active Learning at Miyazaki International College

Founded in 1994, Miyazaki International College (MIC) is a liberal arts college in Japan. It started with the School of International Liberal Arts (SILA), in which students study international liberal arts in English. An overarching educational goal of the school is to foster students' advanced thinking and problem-solving skills (critical thinking skills) through active learning methodology (Otsubo, 2014). Classes at MIC are structured in ways to maximize student engagement through different AL techniques, such as group work, discussions, presentations, debates, and so on. Using content-based English instruction, the school provides an immersion environment in which students can learn specialized content in English while improving their English language skills at the same time. To maintain a global educational environment, more than 70 percent of the faculty is international (non-Japanese) in the school. While being in Japan, students can learn in a global environment that provides excellent opportunities to communicate in English on a daily basis. Since its inception, MIC has incorporated AL into classroom teaching, and classes are organized around AL to maximize student learning. However, it remained unknown how different forms of AL teaching techniques contributed to the development of students' English skills. As a college that relies extensively on AL and uses English as the primary medium of instruction, it is important to understand the nature of AL employed at MIC and how different types of AL have an impact on English skills.

Study Context and Objectives

This study was conducted as part of a larger funded project to improve the quality of education, named the Acceleration Program for University Education Rebuilding (AP). AP is an educational initiative funded by MEXT, which is responsible for various aspects of education in Japan. MEXT also leads various educational initiatives to advance educational quality at different levels. The purpose of AP is to promote the university educational reforms that correspond to the educational policy specified in the Educational Rebuilding Implementation Council (MEXT, 2014). AP started in 2014 with three themes; Active Learning (Theme I), Visualization of Learning Outcomes (Theme II), Entrance Exam Reform / Connection between High school and College (Theme III), in addition to the Themes I & II Combined. AP has been expanded since 2014 with two more themes added in the following

years; Long-Term Off-Campus Study Program (Theme IV) and Quality Assurance in Higher Education (Theme V). AP is a competitive grant that institutions in higher education can apply to. For instance, 70 institutions in higher education applied to Theme I, 7 of which received the grant. AP is a four to six-year project with its total awarded amount being approximately one hundred million, which varies based on the theme, length and necessity.

MIC received a grant for the Themes I and II Combined in 2014. This study is part of its work towards Theme I, Active Learning. The purpose of this study is to understand the nature of AL teaching strategies used in classrooms and perceptions of students about those techniques. Specific questions investigated are listed below:

- Q1. What types of AL teaching strategies do instructors use in their classrooms?

- Q2. How effective do students perceive AL teaching strategies to be for improving English skills?

- Q3. Which AL teaching strategies are perceived more effective than others by students?

Methods and Procedures

Study Design

A cross-sectional design was adapted to investigate and address the questions. More specifically, the design consisted of two surveys; a faculty survey and a student survey.

Samples

Sample for Faculty Survey

All the instructors who belonged to SILA (approximately 30 to 32) were invited to answer a faculty survey once at the end of Fall and once at the end of Spring terms. The total number of the respondents was 27. The respondents were asked to answer about their use of AL methods in a particular course that they were teaching. Characteristics of the courses over two semesters are summarized below in **Table 1**. The discipline type indicates the type of the discipline of the course the respondent completed the survey about. The year of study is divided into three as listed, meaning that 3rd and 4th year students usually take a course together. There are three types of courses; English, team-taught content, and solo-taught

content. English, as its name suggests, indicates courses to teach the English language, such as reading and listening for 1st and 2nd year students. In a team-taught content course, two instructors team teach a specific subject in class at the same time. The instructors usually consist of a specialist in the English language and a specialist in the content area. Solo taught content indicates those courses where instructors teach a specific subject, such as Economy and Psychology, to juniors and seniors.

Category	Choice	Number of Lessons
Discipline Type	Language	5
	Humanities	6
	Social sciences	12
	Natural sciences & technology	3
	No response	1
Grade	1st year	9
	2nd year	4
	3rd/4th year	14
Course Type	English (solo-taught)	7
	Team-taught content	7
	Solo-taught content	13

Table 1. Characteristics of the courses over two semesters. N = 27 for each category

Sample for Student Survey

Due to the nature of a pilot study, particular courses are selected based on availabilities and schedules. To cover a wide range of AL teaching methods, courses for different English skills are particularly selected. Characteristics of the sample are summarized in **Table 2**.

Course Type	Grade	Number of Students
English (Writing)	1st year	6
English (Reading)	1st year	20
English (All skills)	1st year	20
English (All skills)	2nd year	15
Content Class	3rd/4th year	32

Table 2. Characteristics of classes where students responded to the student survey.

Instrumentation

Development of an Active Learning List

To investigate AL teaching methods, it is imperative to understand what types of AL techniques were used in classrooms. A group of MIC faculty members worked towards identifying "Active Learning Teaching Strategies (ALTSs)", teaching methods that MIC faculty members employed in classes. Referring to past literature and conducting class observations followed by instructor interviews, they created a list of ALTSs, including those teaching techniques incorporated on a regular basis at MIC and likely at other institutions as well (Mork & Howard, 2015). **Figure 1** on the left includes a list of ALTSs that have been developed by the group. The list was amended slightly from its original version, turning into the current version listed below.

ALTSs are organized on two axes. One axis is inward vs outward, and the other one is prepared vs extemporaneous. The first dimension indicates whether ALTSs involve communication with others or not. Inward ATLSs are mostly reflective in nature, requiring individual student activities, while outward ATLSs employ interpersonal strategies involving other students, mostly orally. The second dimension involves how much preparation is required for students to complete learning activities. Prepared ALTSs require students to take a longer preparation time than Extemporaneous ALTSs do. In extemporaneous ALTSs, students are typically required to work spontaneously with faculty instructions. The list was organized in such a way that most ALTSs can be categorized in terms of two dimensions. For instance, ALTSs in Category 1 are inward and prepared in nature, indicating that those

ALTSs require students to take a relatively long preparation time and to work individually. ALTSs in Category 5 have a mixture of different characteristics of Category 1 to 4. For a full discussion of the development of the original ALTSs list, please refer to Mork and Howard (2015).

Faculty Survey To investigate frequencies of ALTS use in classrooms, a faculty survey was created. The survey asked faculty to indicate the frequencies of using each ALTS in their courses. They were asked to write down the names of the courses they were teaching during a semester and indicate the frequencies of using ALTSs in the courses by choosing one of the following options; almost every class, about once a week, once or a few times a month, once or a few times a semester, or never. Senior Thesis was excluded from the faculty survey because it is a specific course, rather than a teaching strategy used in a particular class.

	ALTSs
Category 1	①Creative writing
	②Self-assessment
	③Written paraphrases and summaries
	④Feedback survey/report
	⑤Journal writing
	⑥Response/reaction writing
	⑦Senior thesis
Category 2	①Skits and dramatic productions
	②Formal debates and panel discussions
	③Presentation and reverse presentations
	④Creative recitations
	⑤Surveys and interviews
	⑥Peer teaching
Category 3	①Written peer review of written work
	②Pause for reflection
	③Active listening
	④Close reading
	⑤Symbolized paraphrases and summaries
Category 4	①Interactive lectures
	②Facilitated discussion
	③Free discussion
	④Case studies
	⑤Role plays and impromptu skits
	⑥Jigsaw activities
	⑦Oral paraphrases and summaries
	⑧Informal debates
	⑨Group work on questions
	⑩Think-pair-share and think-group-share
Category 5	①Cooperative student projects
	②Simulations and experiments
	③Community based projects
	④Student-created assessment criteria

	No.	ALTSs modified for the student survey
Category 1	1	①Creative writing ⑤Journal writing ⑥Response/reaction writing
	2	②Self-assessment
	3	③Written paraphrases and summaries
	4	④Feedback survey/report
	5	⑦Senior thesis
Category 2	6	①Skits and dramatic productions
	7	②Formal debates and panel discussions
	8	③Presentation and reverse presentations
	9	④Creative recitations
	10	⑤Surveys and interviews
	11	⑥Peer teaching
Category 3	12	①Written peer review of written work
	13	②Pause for reflection
	14	③Active listening
	15	④Close reading
	16	⑤Symbolized paraphrases and summaries
Category 4	17	①Interactive lectures
	18	②Facilitated discussions ③Free discussions
	19	④Case studies
	20	⑤Role plays and impromptu skits
	21	⑥Jigsaw activities
	22	⑦Oral paraphrases and summaries
	23	⑧Informal debates
	24	⑨Group work on questions ⑩Think-pair-share and think-group-share

Fig. 1. The ALTSs List developed by the Active Learning Working Group on the left.

Note: Category 1: Inward-Prepared; Category 2: Outward-Prepared; Category 3: Inward-Extemporaneous; Category 4: Outward-Extemporaneous; Category 5: Potentially a mixture of 4 categories. (The interested reader can refer to Mork and Howard (2015) for the development of the original ALTSs list.)

Student Survey

The purpose of a student survey is to investigate students' perceptions about the effectiveness of ALTSs for English skills. To focus on ALTSs in classrooms, project-based ALTSs carried out mainly outside classrooms (i.e., the ATLSs in Category 5) were eliminated from the student survey. In addition, to ensure that students had a good understanding of each ALTS before completing the survey, the student survey was modified slightly by merging similar ALTSs into one. This process was assisted by a group of students familiar with the ALTSs list. **Figure 1** above on the right is a list of ALTSs used for the student survey. In the student survey, students were asked to indicate their perceived effectiveness of ALTSs in terms of English skills. English skills are divided into five components; reading, listening, speaking, writing, and vocabulary and grammar (V&G). They were asked to indicate their perceived effectiveness of ALTSs for each English skill on a scale of not useful at all, not very useful, a little useful, and very useful.

Procedures

Faculty Survey

The faculty survey was administered using a web-based survey system. Before the survey administration, faculty had opportunities to attend a series of faculty development sessions explaining a list of ALTSs. Additionally, an electronic copy of the list, as well as a hard copy, was circulated to all faculty members to ensure that they understood the list. The survey was conducted at the end of each academic semester in 2017 to 2018.

Student Survey

The study survey was administered after class in two ways. As for freshmen and sophomores, who might not be familiar with ALTSs, an instructor selected ALTSs which were actually employed in class. For those selected ALTSs, students were asked to indicate their perceived effectiveness in terms of five types of English skills, including reading, writing, listening,

speaking, and V&G. As for juniors and seniors, who were expected to be familiar with ALTSs, they were asked to answer the questionnaire for all of the ALTSs. The total of 93 students in six different classes completed the survey in 2019.

Findings

Assessment of Faculty Use of ALTSs

Legend: ■ Almost every class ■ About once a week ■ Once or a few times a month ■ Once or a few times a semester

Category 1
- Creative writing: 4, 8
- Self-assessment: 2, 8
- Written paraphrases and summaries: 5, 6, 6
- Feedback survey/report: 2, 11
- Journal writing: 1, 1, 2, 7
- Response/reaction writing: 3, 8, 4

Category 2
- Skits and drama productions: 1, 2, 7
- Formal debates and panel discussions: 3, 2, 1
- Presentations and reverse presentations: 1, 4, 15
- Creative recitations: 1, 2
- Surveys and onterviews: 1, 9
- Peer teaching: 2, 1, 2, 11

Category 3
- Pause for reflection: 14, 3, 5, 3
- Active listening: 6, 3, 7, 3
- Close reading: 4, 4, 6, 5
- Symbolized paraphrases and summaries: 1, 2, 4, 3
- Written peer review of written work: 1, 7, 3

Category 4
- Interactive lectures: 11, 3, 6, 2
- Facilitated discussions: 2, 4, 6, 2
- Free discussions: 8, 7, 6, 4
- Case studies: 1, 1, 5, 7
- Role plays and impromptu skits: 3, 6
- Jigsaw activities: 3, 3, 9
- Oral paraphrases and summaries: 2, 7, 6, 5
- Informal debates: 1, 1, 4, 2
- Group work on questions: 10, 3, 7, 4
- Think-pair-share and think-group-share: 3, 4, 4, 6
- Oral peer review of written work: 2, 3, 7

Category 5
- Cooperative student projects: 1, 6
- Simulations and experiments: 3, 3, 3, 5
- Community based projects: 1, 7, 4
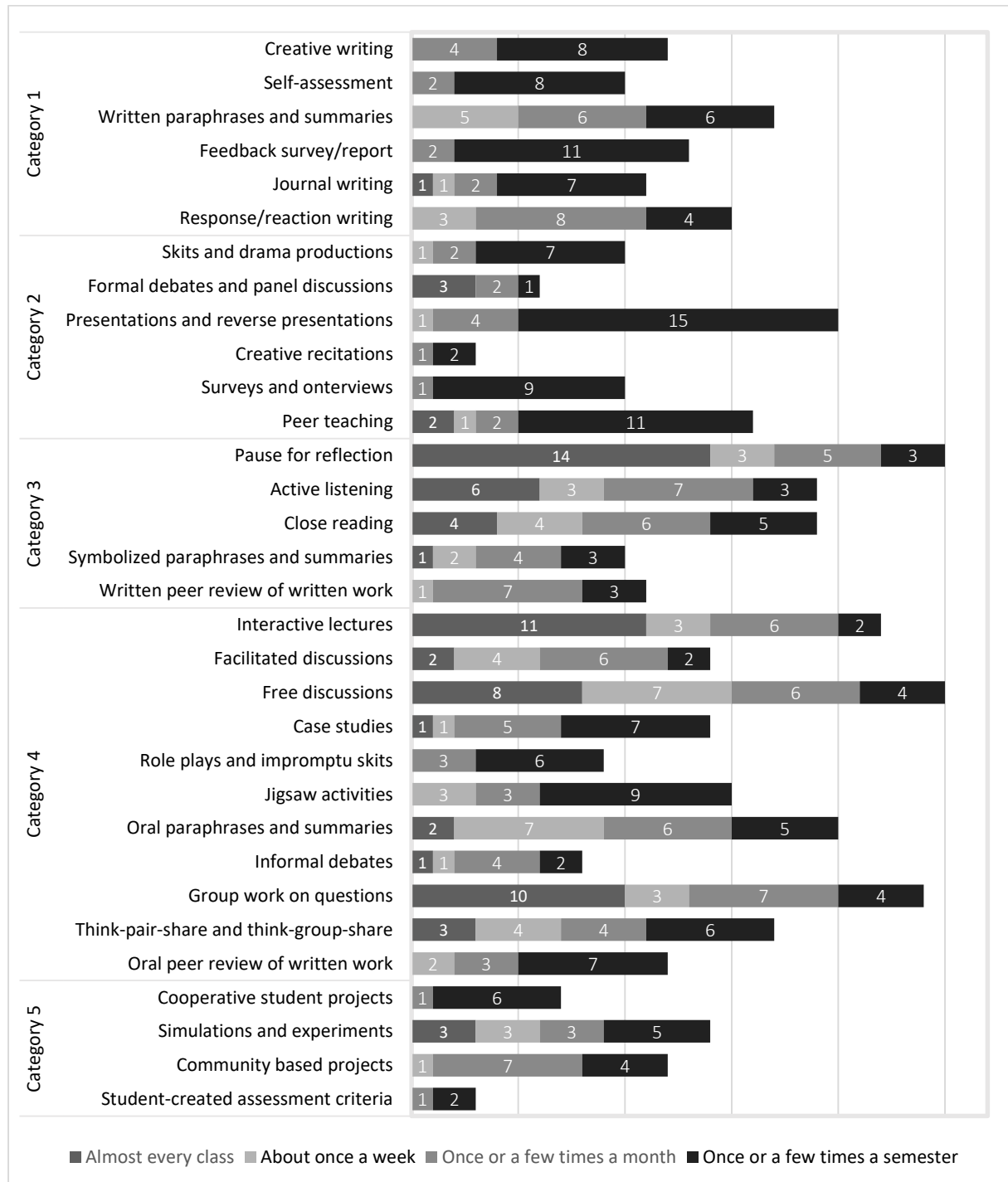- Student-created assessment criteria: 1, 2

Fig. 2. Summary of the faculty survey results. N = 27

As shown in **Figure 2**, ALTSs in Category 3 and 4 tended to be employed more frequently than other ALTSs did. Pause for reflection, active listening and close reading were popular in Category 3, while free discussions, group work on questions, and interactive lectures were the top 3 ALTSs among those in Category 4. Specifically, among those that were used frequently in Category 4, interactive lectures, group work on questions and free discussions were used in almost every class by 11, 10 and 8 respondents respectively. In Category 3, 14 respondents indicated their constant use of pause for reflection. ALTSs in Category 3 and 4 are extemporaneous in nature, in which students are asked to work on class activities promptly with faculty instructions. Therefore, the results indicate that respondents preferred to use a prompter nature of ALTSs, in which students were engaged in class activities spontaneously and in a lively manner.

In Category 1, written paraphrases and summaries, and response/reaction writing were frequently adopted. Presentations and reverse presentations, and peer teaching were comparatively more used than others in Category 2. Presentations and reverse presentations did not seem to be employed very often. However, with a relatively long preparation time typically required for presentations, presentations seemed to be incorporated into classes effectively, used at least once during the semester by 15 respondents.

Although those in Category 5 were not utilized as frequently as other ALTSs, it does not necessarily mean that ALTSs in Category 5 were not adopted much. ALTSs in Category 5 usually take a longer class time period than others do. For instance, in community-based projects, students cooperate with members of the wider community either as a group or individually. This type of project is more likely to take longer than other short-time ALTSs in classrooms, such as free discussions and group work on questions. Considering the nature of ALTSs in Category 5, the results might show that those in Category 5 were used relatively frequently by MIC instructors.

ALTSs Used Very Frequently

To identify ALTSs that were employed very frequently, responses ("almost every class," "about once a week, "once or a few times a week" "once or a few times a month," "once or a few times a semester," and "never") were divided into two groups."Almost every class" and

"about once a week" were grouped together into a frequently-used group because ALTSs in this group were adopted at least once out of two classes (most courses meet twice a week). The other response options were grouped together into an infrequently-used group. The results were summarized in **Figure 3**, indicating the number of courses where the listed ALTSs were used at least once every class. In the order of frequency, the following ALTSs were employed at least onceevery two classes; pause for reflection (17 courses), free discussions (15), interactive lectures (14), group work on questions (14), oral paraphrases and summaries (9), active listening (9), and close reading (8).

ALTSs   Number of classes

- Pause for reflection: 17
- Free discussions: 15
- Interactive lectures: 14
- Group work on questions: 13
- Oral paraphrases and summaries: 9
- Active listening: 9
- Close reading: 8
- Think-pair-share and Think-group-share: 7
- Facilitated discussion: 6
- Written paraphrases and summaries: 5
- Jigsaw activities: 3
- Peer teaching: 3
- Formal debates and panel discussions: 3
- Response/Reaction writing: 3
- Informal debates: 2
- Case studies: 2
- Journal writing: 2
- Written peer review of written work: 1
- Presentation and reverse presentations: 1
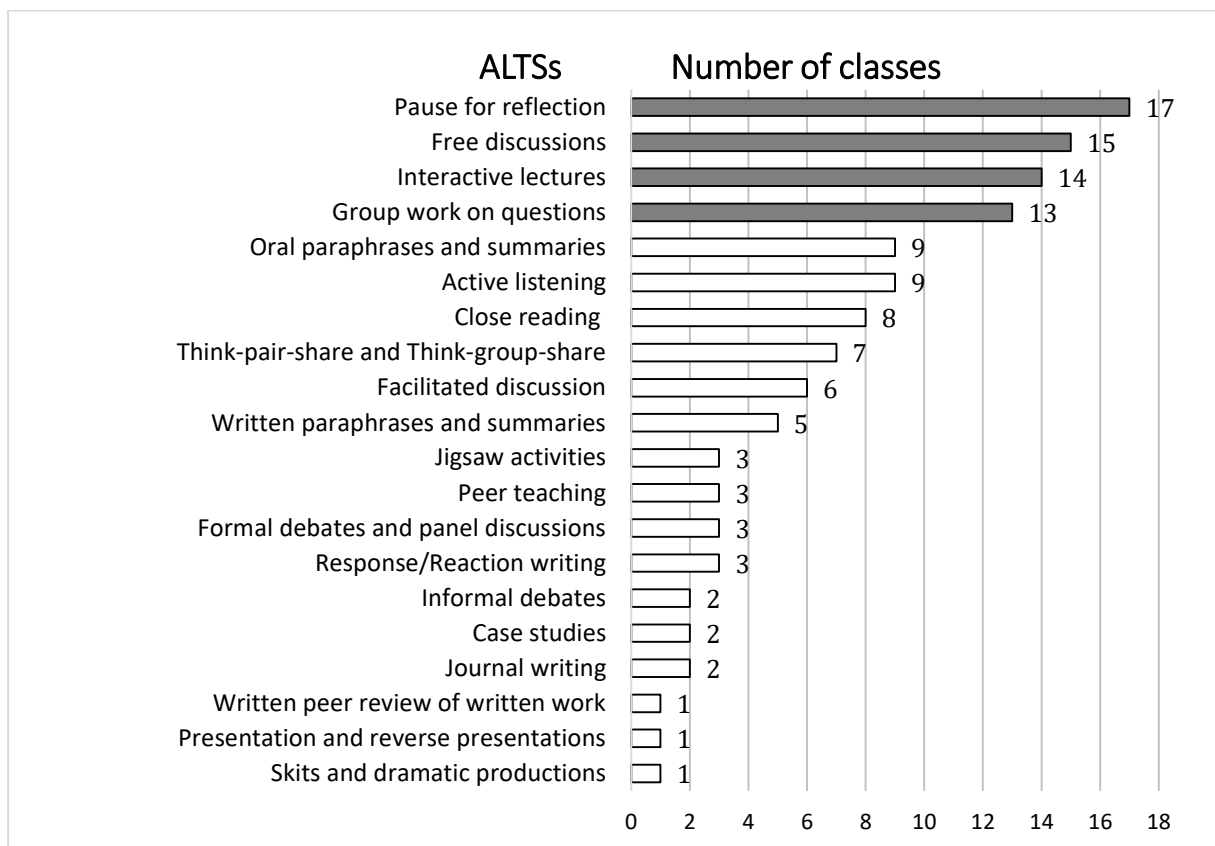- Skits and dramatic productions: 1

Fig. 3. Number of courses where the listed ALTSs were used at least once out of two classes. N = 27

Assessment of Students' Perceptions

To make meaningful comparisons about students' perceived effectiveness of various ALTSs against different English skills, scores were assigned to students' evaluations. Specifically, the following system was adopted; a scale of 0 to 3 with 0 being not useful at all, 1 being not very useful, 2 being a little useful, and 3 being very useful. **Figure 4** shows the distribution of all the students' scores. The average of all the students' scores was 2.01 with a standard

deviation (SD) of 0.26. The deviation value 60 corresponding to the top 15% was 2.27 (2.01 + 0.26), and the deviation value 40 corresponding to 15% from the lower level was 1.75 (= 2.01 - 0.26). To discuss comparative effectiveness, it was decided that 2.27 points or more indicates a very effective ALTS to improve a particular English skill.
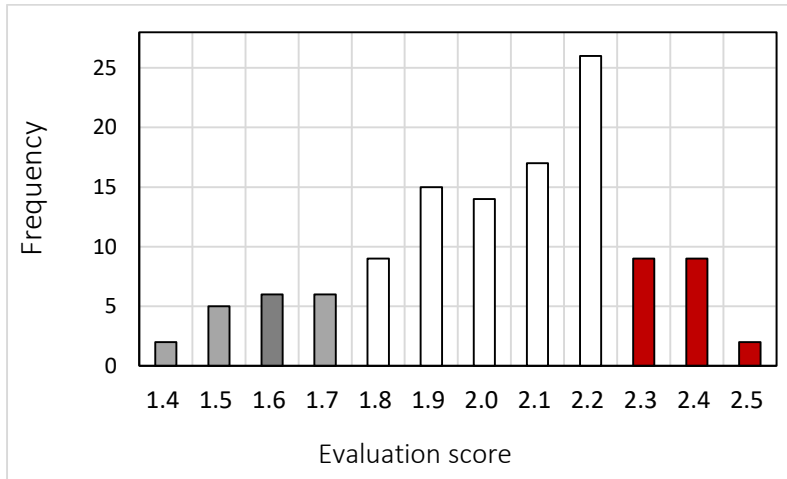

Fig. 4. Distribution of all the students' evaluation scores. Mean, mode and SD were 2.01, 2.20 and 0.26, respectively.

Table 3 includes all the averages of the students' scores across all types of English skills. Scores more than 2.27 (one SD above the mean) were written in bold. Students perceived the following ALTSs effective to improve reading skills: close reading (2.44 on a scale of 0 to 3), senior thesis (2.39), and written peer review of written work (2.33). For writing skills, written paraphrases and summaries (2.45), written peer review of written work (2.42), senior thesis (2.39), creative, journal, response/reaction writing (2.28) were perceived to be very effective.

No.	ALTSs	Average Scores				
		Reading	Writing	V & G	Listening	Speaking
1	Creative writing Journal writing Response/Reaction writing	2.10	**2.28**	2.18	1.96	1.90

2	Self-assessment	1.72	1.76	*1.66*	*1.57*	*1.56*
3	Written paraphrases and summaries	2.16	**2.45**	2.19	*1.42*	*1.45*
4	Feedback survey/Report	2.13	2.07	2.19	1.90	1.94
5	Senior thesis	**2.39**	**2.39**	**2.35**	*1.61*	*1.71*
6	Skits and dramatic productions	1.80	1.81	1.89	1.89	1.99
7	Formal debates and panel discussions	1.97	*1.63*	1.97	2.16	2.16
8	Presentation and reverse presentations	1.85	1.76	1.95	1.94	2.19
9	Creative recitations	*1.45*	*1.42*	*1.62*	*1.70*	1.88
10	Surveys and interviews	2.15	2.17	2.14	**2.30**	**2.30**
11	Peer teaching	2.09	2.10	2.15	2.10	2.09
12	Written peer review of written work	**2.33**	**2.42**	**2.39**	*1.45*	*1.45*
13	Pause for reflection	2.19	2.22	**2.28**	2.11	2.17
14	Active listening	2.06	2.01	**2.31**	**2.37**	2.23
15	Close reading	**2.44**	1.91	2.06	*1.47*	*1.59*
16	Symbolized paraphrases and summaries	2.16	2.09	2.18	1.90	1.97
17	Interactive lectures	2.10	2.00	2.15	2.15	2.18
18	Facilitated discussion / Free discussion	1.80	1.85	1.90	2.04	2.16
19	Case studies	1.97	2.19	2.13	1.94	2.00
20	Role plays and impromptu skits	1.76	1.79	1.86	2.02	2.10
21	Jigsaw activities	*1.75*	1.97	1.84	*1.68*	*1.74*
22	Oral paraphrases and summaries	2.19	2.11	2.15	2.15	**2.35**

23	Informal debates	1.98	1.92	2.05	**2.31**	**2.39**
24	Group work on questions Think-pair-share and Think-group-share	2.18	2.25	2.20	**2.34**	**2.46**

Table 3. Summary of the averages of all the responses. Note: N = 93. Numbers in bold are larger than 2.27.

Listening and speaking had a similar result; group work on questions and think-pair/group-share (2.34 for listening and 2.46 for speaking), informal debates (2.31 for listening and 2.39 for speaking), surveys and interviews (2.30 for both), active listening (2.37 for listening), and oral paraphrases and summaries (2.35 for speaking) were perceived very effective. Written peer review of written work (2.39), senior thesis (2.35), active listening (2.31) and pause for reflection (2.28) were found to be effective to improve V&G skills.

Some ALTSs received high scores for more than one English skill. Senior thesis and written peer review of written work had more than 2.27 (one SD above the mean) on three different English skills. Surveys and interviews, active listening, informal debates, and group work on questions and think-pair/group-share had 2.27 above on two different skills. Furthermore, it was found that some ALTSs had a relatively high score on all the English skills. At least 2.00 was marked on all the English skills in surveys and interviews, peer teaching, pause for reflection, active listening, interactive lectures, oral paraphrases and summaries, and group work on questions and think-pair/group-share. These ALTSs might work effectively to increase a variety of English skills. Especially, surveys and interviews, active listening, and group work on questions and think-pair/group-share received more than 2.00 on all the English skills with 2.27 above on two skills. In addition, the results from the faculty survey indicate that faculty tended to employ these ATLSs frequently. Thus, there seems to be an overall match between frequent faculty use of ALTSs and the students' perceptions.

4.4 Relationships of Perceived Effectiveness among English Skills

To investigate whether a particular ALTS is considered effective for multiple English skills, correlation coefficients of students' evaluation scores were calculated in **Table 4**.

	1	2	3	4	5
1.Reading	1.00	0.76*	-0.04	-0.19	0.87**
2.Writing		1.00	-0.10	-0.19	0.84**
3.Listening			1.00	0.96**	0.16
4.Speaking				1.00	0.05
5.V & G					1.00

*p<.01 *p<.001

Table 4. Correlation coefficients among different English skills

As **Table 4** shows, relatively high correlation coefficients were found in the relationships between speaking and listening (0.96), reading and V&G (0.87), writing and V& G (0.84), and writing and reading (0.76). The high correlation between speaking and listening indicates that ALTSs considered effective for speaking is likely to be so for listening as well. There is a similar positive relationship among writing, reading and V&G. Thus, reading, writing and V&G were grouped together as English learning through the written mode, while listening and speaking were listed as English learning through the oral/aural mode. Based on this grouping, two graphs were created in **Figure 5**, indicating most effective ALTSs for multiple English skills.
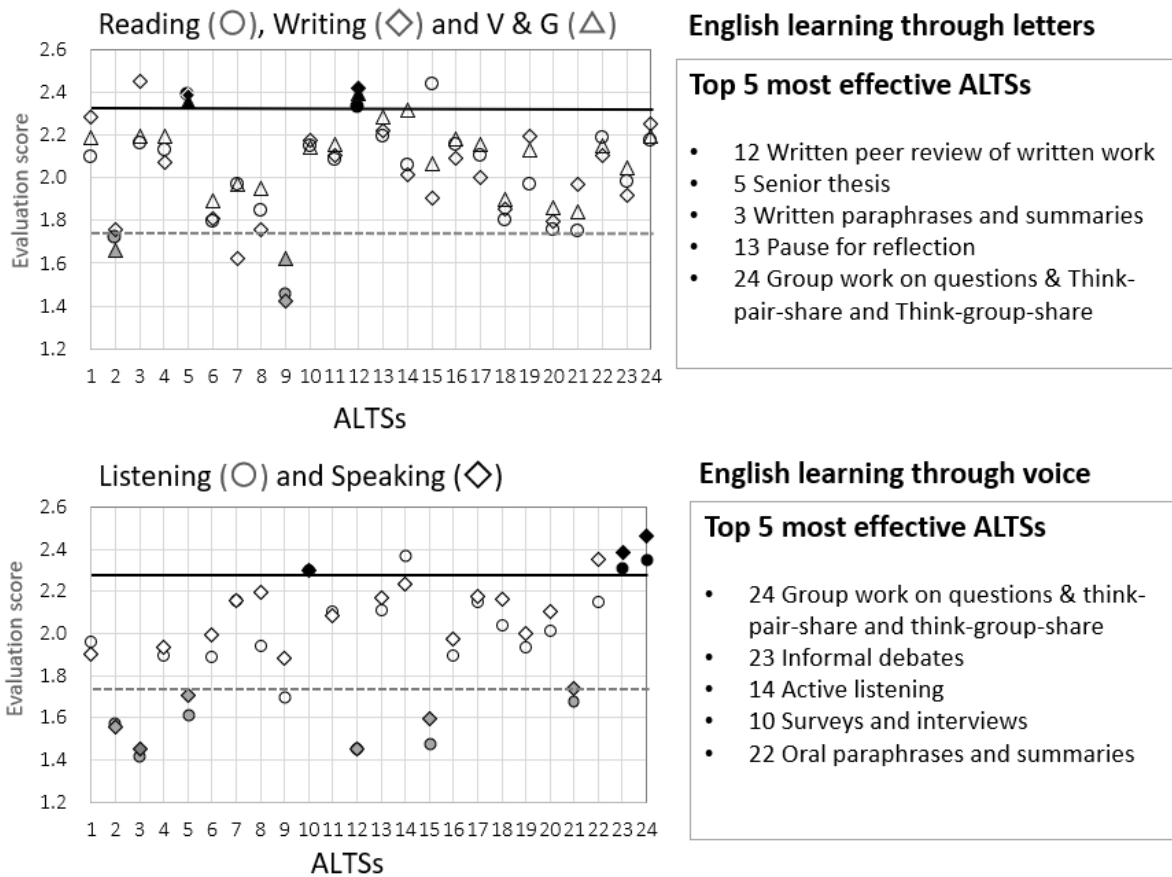
Fig. 5. Plots of the averages of the evaluation scores on ALTSs in English skills: reading, writing, and V & G (upper) and listening and speaking (bottom).

Specifically, the top 5 most effective ALTSs for English learning in the written mode were selected based on the averages of the student evaluation scores on reading, writing, and V&G. The top 5 most effective ALTSs for English learning through the oral/aural mode were chosen in the same way. As shown in **Figure 5**, it was found that the ALTSs that students perceived to be most effective for reading, writing, and V & G were written peer review of written work, senior thesis, written paraphrases and summaries, pause for reflection, and group work on questions & think-pair/group-share in order of their effectiveness. As for English learning through the oral/aural mode, group work on questions and think-pair/group-share, informal debates, active listening, surveys and interviews, and oral paraphrases and summaries were identified the most effective in order of their perceived effectiveness.

Discussion

This study investigated the faculty use of ALTSs at MIC and students' perceptions about their effectiveness on different English skills. A body of evidence shows that different forms of AL were effective (Prince, 2004). This study becomes an important contribution to the AL literature by taking one step towards exploring AL at MIC, one of the colleges in Japan where AL has been exclusively incorporated into classrooms.

Overall, results from the faculty survey show that ALTSs of the extemporaneous type, those in Category 3 & 4, were used frequently. Especially, pause for reflection, active listening and close reading were popular in Category 3, and free discussions, group work on questions, and interactive lectures were employed quite often in Category 4. Written paraphrases and summaries, and response/reaction writing were frequently utilized in Category 1. Presentations and reverse presentations, and peer teaching were popular in Category 2. However, caution needs to be taken in interpreting the results of the faculty survey because some ALTSs take a longer period of class time than others do, which might influence their choices. For instance, presentations typically take a long preparation time on the part of students and need a long class time, which makes it impossible to incorporate them as often as other short-term ALTSs. In interpreting the results of the faculty survey, it is important to consider the nature of ALTSs and how it could affect faculty choice of ALTSs in classrooms.

In addition, this study examined how effective students perceived ALTSs to improve different English skills. Correlation coefficients were calculated to identify a strong relationship among the perceived effectiveness of different English skills. Based on the coefficients, the top 5 most effective ALTSs for English learning through letters and voice were identified respectively. Although it is difficult to make clear conclusions from the present study, the following findings based on the two survey results may be worthwhile:

1) ALTSs that faculty tended to use very frequently, such as pause for reflection, interactive lectures, group work on questions & think-pair/group-share, active listening, and oral paraphrases and summaries, were overall perceived effective by students to improve all the English skills.

2) ALTSs that faculty did not employ frequently, such as skits and dramatic productions, self-assessment, feedback survey/report, and role plays and impromptu skits, were not found to be effective by students. It is likely that those ALTSs were used for specific purposes, other than improving English skills.

3) Faculty did not indicate their regular use of the ALTSs (surveys and interviews, and informal debates) that students identified as effective to improve listening and speaking skills.

These findings imply an overall match between faculty use of ALTSs and students' perceptions about their effectiveness. Faculty may quite often employ ALTSS that students found effective to improve various English skills. The findings may suggest that the best AL practices to improve particular English skills are those ALTSS identified as the top 5 ALTSs. It is possible that students perceived those strategies as effective because they were most often use. In addition, faculty may not often use ALTSS that students did not perceive effective for English improvements. Those ALTSs, such as creative citations, may be employed for specific learning outcomes, other than English skills.

Limitations

There are some limitations to this study. First, not all the faculty members completed the faculty survey. If there had been more respondents to the survey, it would be possible that different ALTSS were used more frequently than the results of this study indicate. In addition, some ALTSs are specific to particular courses, which might have influenced on the results of faculty use of ALTSS. For instance, journal writing or close reading is more likely to be used in English writing classes than regular content courses. These ALTSs could have been employed more frequently if there were more survey respondents who taught English. It is possible that ALTSs that can be easily adopted in any type of class (e.g. pause for reflection and group work on questions) were used frequently because of their applicability to any course. Furthermore, due to the pilot nature of the student survey, samples were selected based on course schedules and availabilities. It is hard to generalize the student results into the whole student population.

Second, this study investigated students' perceptions of effectiveness of ALTSS on English skills, but not on observable English skills. Their perceptions are important, but do

not necessarily reflect the real effects of ALTSs. For future research, it is imperative to measure the actual effects of ALTSs on English skills using standardized tests. This way, it will become possible to analyze how effective different ALTSs are to improve particular English skills.

Lastly, due to its focus on English skills, this study could not capture other potential benefits of ALTSs. For instance, the ALTSs, presentations and reverse presentations, whose scores were relatively low across all the English skills, have a positive influence on communication and presentation skills. Creative citations was not well received by students either, but the teaching technique may contribute to the development of essential skills, such as creativity and imagination. Effective ALTSs would be different if other types of educational outcomes had been measured.

Acknowledgements

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SQ4R: An old active reading technique worth teaching in today's CLIL classes

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Introduction

Based on his research in the 1940s, Ohio State University psychologist Francis P. Robinson devised a study method he called the SQ3R method (or SQRRR - survey, question, read, recite/retrieve, review) to help military personnel learn specialized skills in as little time as possible. In his commentary ahead of Veteran's Day in 2002, adult literacy specialist Thomas G. Sticht called it "The reading formula that helped win World War II" (2002, p.18).

Multiple spin-offs of the SQ3R method, including PQRST (preview, question, read, self-review, test) and SQ4R (explained below), have been developed over the years since World War II. All of these critical reading techniques provide a systematic approach to reading, suggesting the reader write down a set of questions first and then read actively with the aim of answering those questions. For language learners, these forms of active reading are highly appropriate for learners in CLIL (Content and Language Integrated Learning), EMI (English Medium Instruction), or CBI (Content Based Instruction) courses – where students are not only reading to understand language, but also, and sometimes more importantly, to understand the content conveyed through the language.

Not all English language instructors explicitly teach learners how to read strategically. They certainly help students learn the language necessary to read and understand text, but not necessarily the strategies necessary to comprehend the meaning transferred through the text. This is not to say that language instructors never embed strategies into their teaching materials. Typical reading materials for foreign language instruction include a mixture of the following: pre-reading sections to activate learners' prior knowledge, to pre-teach key vocabulary, and to preview the text; the text itself, which is often already adorned with notes

in the margins, highlighted sections, and footnotes; comprehension checks in a variety of formats; and follow-up questions or projects for deeper understanding, analysis, or reflection.

However, what happens when the student is cast out of this L2 (second language) reading approach into a less-scaffolded EMI environment? The learner is often presented with text all by itself, crutches removed. Many learners will have internalized what they need to do after repeated subjection to processes presented in the language classroom. However, there are those who will also not have made the connection. Still others may not have had adequate L2 reading exposure to allow them to make these connections. Exacerbating the problem, content specialists in a CLIL or EMI environment, or even those teaching in a learning environment where the learners all have the same L1 (first language), may assume learners already possess a modicum of reading ability, when in fact they do not.

At Miyazaki International College (MIC), students tend to start from a generally low proficiency in English (CEFR A1 or A2), and have only three semesters of English language immersion before they are thrust into purely content courses with, in theory, little to no language support. Language instructors can afford little time for the explicit instruction of reading strategies to freshmen and sophomore students when there is a plethora of other basic language objectives to cover. Nonetheless, knowing how to read strategically is of great importance to MIC students. With this skill, learners are better able to understand and recall more of what they read. Without this skill, learners may falsely assume that simply reading and re-reading the material is an effective way to understand and learn. This is why instructors who are content specialists, in addition to EFL instructors, can benefit from familiarity with one or more strategic reading techniques so that they are better equipped to help students in a CLIL environment. This paper outlines one such active reading technique – SQ4R – and provides simple suggestions for widely implementing its instruction.

What is SQ4R?

The origins of the extra "R" that has been added to the original SQ3R are difficult to trace. Moreover, different scholars and practitioners appear to have ascribed different words and meanings to each of the Rs in the acronym (see Pauk, 2010 and Handoko, 2017). However, Google searches show that SQ4R most commonly stands for survey, question, read, record,

recite, and review: survey the chapter, article, story, etc.; write questions for each heading or section; read the text in parts, sections, or chunks; record by taking notes of important information; recite notes out loud; review the questions previously made and attempt to answer them.

1. Survey

Surveying helps readers determine the organization of the text and what they must learn so that they are better able to grasp the main ideas. Readers take a few minutes to read the introduction, headings, subheadings, and the summary or conclusion. They also glance at graphs, photos, charts, and other images, and skim any captions to help with visualizing information. These actions allow learners to make sense of the text when they proceed to read it.

2. Question

Next, readers change any headings, subheadings, or topic sentences into questions that they write down, using the basic questions words who, what, when, where, why, and how. These questions are regularly referred to as learners read the text. In addition, readers ask themselves what they may already know about the topic of the text, which helps them to associate new information with previously acquired information. Creating these associations makes new information easier to remember and helps the reader know what to give attention to as they read.

3. Read

Now that learners are prepared to read the text, they do so attentively, looking for answers to the questions they prepared earlier as well as other important points and ideas. They read one manageable section or chunk of text at a time, keeping their questions in mind.

4. Record

Readers take notes while they read, recording definitions, explanations, facts, and details of ideas or concepts detailed in the text. They use single words or short phrases as opposed to full sentences in order to be concise and save time. If there is something they do not understand, they can make note of that fact by adding it to their list of questions.

5. Recite

Students recite their notes by reading them out loud after finishing each section or chunk of the text. Reciting deepens connections in the brain between what the reader already knows

and what they are reading, helping with long term retention. By imagining they are teaching what they have learned in simple English to a peer, or better still, to a child, learners further deepen their learning (Crew, 2018).

6. Review

After completing a few sections or chunks of the text, readers now return their attention to the questions they created and try to answer them out loud. This process reinforces the connections they made in the previous step. They go back to their notes, or even reread parts of the text if necessary, until they have confidence in their mastery of the content. If uncertainty remains, learners may need to consult with teachers or with additional sources to find answers.

Students repeat the process from step number two (or three, four, or five -- depending on the student's assessment of their own needs), until the text in its entirety has been successfully understood.

Teaching SQ4R

Although English language and literature instructors may be more in tune with the potential need to explicitly teach reading strategies, for some content instructors, there might be more desire to devote class time to covering the content they teach. In the long run, however, courses that demand learning through reading will be much more beneficial to students if students have sufficient reading skills.

For this reason, strategic teaching of content is essential. Flipping instruction, for example, could allow instructors to teach the SQR4 technique and save class time. Students could watch a pre-recorded lecture or video about the technique at home and be asked to answer questions on it or attempt to summarize it (I have created a video about SQ4R for EFL learners here: https://youtu.be/Vq19QIlx0iE). Better still, and more appropriately, students can read about the technique, using the technique itself to tackle the text (a meta approach). It is helpful if instructors explain the rationale for the technique. If learners are convinced by its potential for success, they will be more likely to buy into a strategy that will take more time and effort than that to which they may be accustomed. Students should also be encouraged to adapt the technique in any way they see fit, provided that they are still able to achieve learning outcomes.

I believe using a template to scaffold the SQ4R experience is a helpful way to introduce the technique to learners when reading course content. A template provides prompts for students to refer to as they set about the task of reading for meaning. As students become more experienced with SQ4R, this template can be pulled away. Much like the reading exercises used by language instructors outlined at the beginning of this article, a template like this is a crutch of sorts, but the onus for deciding what is important and how to extract that information is more on the learners. (A template that I created for my students is in the Appendix.)

Conclusion

The SQ4R method is a form of active learning that suits an individual's study preferences. It helps learners with long-term recall, prompts them to create study materials to prepare for testing, and helps them to diagnose mistakes in their understanding as well as to purge any areas of confusion.

The method does indeed take some time for students to learn and requires mental energy. Learners may not implicitly understand its benefits and therefore elect not to do it due to the time and effort required. It can also be done badly. For example, learners could mark or highlight their text too much, without being mindful or engaging with the content. Instructors need to remind learners that although applying the six steps may feel strange or time-consuming, the SQ4R method will become natural if they keep at it. Learners may also need to be reminded that they can adapt the six steps. SQ4R, like similar reading strategies or techniques, is meant as a tool or guideline, not a rule that must be accurately followed to perfection.

Appendix

SQ4R Template

1. SURVEY: *SKIM, SCAN or PREVIEW for overview of content and purpose. Check meaning of key terms.*

What do I already know?	What do I predict I might learn?

2. QUESTIONS: Write questions: *What? When? Who? Where? Why? How?*

3. READ: *Answer questions raised, scan for specific information, skim for main ideas.*

4. RECORD: *While you read, write annotations in your text (highlight, circle, underline; write synonyms, antonyms, definitions, notes, translations between the lines or in the margins), take notes on paper or using a laptop.*

5. RECITE: *Teach the key concepts to a partner/ classmate/ friend. (You can also RESTATE in writing the main idea(s) and key concepts in your own words (notes/ diagram/ mind-map).)*

6. REVIEW: *REREAD your notes. You might want to REVISE them for study later. Review your reading objectives questions asked earlier. Write a paragraph summary. Also, RELATE and REFLECT by making connections with what you already know about the topic and how you will use this new information.*

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Self-Directed Learning at MIC: Current Strategies and Future Possibilities

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Abstract

In this paper, the author considers the possibility of developing self-directed learning at MIC. Self-directed learning means learning which is planned, carried out and evaluated by students themselves. After describing the growth of interest in self-directed learning in English-Language education over the past three decades, the author examines our campus and programs with a view to identifying where self-directed learning is already occurring and how further promoting of self-directed learning might benefit students. Drawing on case-studies of programs at other universities, suggestions are made about how small-scale changes might be implemented to increase the awareness and effectiveness of self-directed learning. It is further suggested that any changes should be accompanied by research into self-directed learning and students' learning needs.

Introduction

Self-Access Learning Centers (SALCS) have been growing in popularity since the 1990s. As Sheerin (1991) explains, this shift was part of a methodological trend away from teacher-centered pedagogies such as audiolingual or behavioral training, towards learner-centered methods. One reason for the popularity of self-access is that it is a way to deliver individualized learning (Sheerin, 1991, p. 143). During the 1990s, interest in learner autonomy and self-directed learning was steadily growing in Japan (Aoki & Smith in Cotterall, 1999, p.19-28). One of the first self-access centers in Japan was established at Akita International University in 2004, under the direction of Garrold Murray (Murray, 2018,

p. 102). By 2019, there were over 40 "Language Learning Spaces" listed on the Japan Association for Self-Access Learning homepage.

Understanding self-directed learning is becoming imperative for language educators in Japan due to the increasing diversity of student levels and nationalities. The total number of overseas students in Japan in 2014 was over 138 thousand, over double that in 2000 (MEXT, 2014). At the same time, a larger proportion of 18-year olds are enrolling in university (92% in 2010, ibid), leading to a wider range of ability among domestic students. Accommodating such diverse needs with appropriate levels of challenge and support requires more resources, more hours of contact with the language, more individual attention than the conventional classroom can provide. A resource-rich environment, together with guidance on how to use it, has been found an effective way of helping students to take control of their own learning and develop both learning skills and language. In this paper, I would like to reflect on the provision for self-directed learning at Miyazaki International college, with a view to stimulating discussion and further research For the purposes of definition, this paper will presume that self-directed learning means learning with an agenda created by the learner, whereas self-access learning means learning done without a teacher. Self-access learning is more concerned with the space and the resources for learning, while self-directed learning describes learning planned by the learner.

Context

Miyazaki International College (MIC) has a tradition of content-based learning in English stretching back to its founding in 1994 (Mulvey, 2018). Currently the college has a small self-access center known as ARC (Academic Resource Center) and a social learning space ("the international lounge"). Since 1999, the focus of research has been on methodologies for fostering student engagement in content-and-language-integrated learning (Isbell, 1999, 2004) and active learning (Mork & Howard, 2015), more than self-access learning. Due to increasing diversity of student levels and nationalities, the following questions arise: "How could we exploit self-directed learning at MIC to help students at the upper and lower end of the learning ability spectrum and those whose first language is not Japanese?" "What can we learn by looking at provision for self-directed learning at other universities who have been emphasizing self-directed learning over several curriculum cycles?"

Connecting Active Learning with Self-Directed Learning

The term "self-directed learning" became widely used in the USA during the 1980s, referring to adult education. The term "self-directed learning" is defined by Knowles as "a process in which individuals take the initiative without the help of others in diagnosing their learning needs, formulating goals, identifying human and material resources, and evaluating learning outcomes" (1975, p. 18). Saks and Procedia, in a study of components of self-directed learning and self-regulated learning, identify active participation as one component in self-directed learning. (Saks & Procedia, 2014, p. 191). Christmas (2015) following Astin (1999) describes the following elements of active learning: transparency of course goals and assessment, student engagement with class content and with their peer group (Christmas, 2015, p. 45). These features constitute scaffolding for self-directed learning but are not enough per se to guarantee continued learning outside the classroom. Saks and Procedia point out that self-directed and self-regulated learning require the following: "setting goals and analysis of the task, accomplishment of the plan and self-assessment of the learning process" (p. 192).

Active Learning has long been a curricular focus at MIC but it has gained new vigor since the implementation of the MEXT Acceleration Policy in 2014 (Howard & Mork, 2015, p. 67-8.). MIC's content-based program has undergone many cycles of development to raise teachers' awareness of active learning and to promote the use of teaching strategies which encourage engagement and critical thinking. The concept of Active Learning outlined by Howard and Mork involves learner autonomy, but does not focus on the role of out-of-class learning and the possibilities of a materials-rich environment.

Self-directed learning is an important issue in an English-medium environment like MIC. The transition from being an active learner to being "self-directed" seems to happen naturally for some learners, as a result of being in a stimulating environment. But in the author's experience, many first year students at MIC undergo an "initiation period" akin to starting study abroad. For weaker students, that initiation can be marked by anxiety, particularly when compounded with difficulties in oral/aural skills and anxieties about social skills in L1. Group-cooperation is vital. For example, students receive a challenging task such as making an e-portfolio or pptx presentation in a group. One or two students informally take a leadership role by asking questions to the teacher during the class, and explaining to classmates. In the classes I have taught and participated in as a team-teacher, there is

frequently a period of questioning and checking (sometimes in Japanese) after the teacher has stopped talking. This period gets shorter as the students get accustomed to all-in-English instruction and to the particular activities of a course. When making group presentations for a class taught by the author in Spring 2019, about a fifth of the students made office visits for the purpose of more detailed explanations. Students' written reflections revealed that they had undergone a tough experience but also bonded with their classmates and gained confidence from being able to achieve a goal. However, some of the skills which were developed in the course of this learning trajectory were not formally assessed or counted as goals within the program. If their listening was not good enough to understand first time, the students who had enough social skills, could learn from classmates, or visit the teacher. But if shy students missed out due to their lack of language skills, then they risked failure on a content goal (such as the pptx or the Mahara page). Thus, more scaffolding might help students whose English language level is low. It would also be useful to do further research into how students deal with these kinds of challenges and whether they believe that they develop transferable skills.

During the academic year 2019-20, stimulated by the experience of teaching a mixed ability group for the teacher license course in the previous year, I began reading about self-directed learning with a view to comparing the learning environment at MIC to that of other liberal arts programs in Japan. I was particularly interested in knowing more about long-established programs, such as those at Akita International University (AIU) and Kanda University of International Studies (KUIS) as sources of insight into strategies for enhancing self-directed learning. These universities have developed credit-carrying courses, which are taught in a self-access language learning environment with guidance by instructors and support staff. It was notable that their use of self-access was personnel-intensive, as both places use 1:1 consultations with learning advisors. In this paper, I ask what can be learned from programs which foreground self-directed learning, and put forward ideas related to future curriculum development and further research into language learning environments at MIC.

Self-Directed Study at MIC

In many ways MIC offers an ideal environment for self-directed learning. A high proportion of faculty have expertise in both content and second language-acquisition. The college's emphasis on active learning and critical thinking offers affordances for rapid language development. The success of the program is evidenced by the increase in students' average TOEIC scores and vocabulary scores from year 1 to the end of year 2 (Bennett, 2018). Although there has been no unified "self-directed study" program to date, there are plenty of resources available. Without further research into how students perceive these resources it is difficult to get a complete picture of how and to what extent their needs are being met. In particular, in the third year of study students are required to write a senior thesis which requires a high level of self-directed study and planning, for which many seem to be unprepared. Having experience of self-directed learning projects before they undertake their senior thesis might aid students in these situation. Furthermore, explicit instruction in self-directed learning could also help students to extract more benefit from study abroad in their second year.

Overview of Resources for Supporting Self-Directed Learning at MIC

- Professors, available for several hours per week within office hours and by appointment. Many entertain drop-in visits throughout most of the week as well.

- Student learning assistants, who are available to assist with a particular class or learning need at the request of a particular professor, can provide help during class time and also provide valuable role models, if professors choose to employ them.

- The academic resource center (ARC), staffed and managed by a graduate of the college for several hours in the afternoon and evening each day.

- The international lounge, a study and meeting space.

- The library, a large, traditionally quiet space with a video watching space and many private rooms which can be booked for private sessions.

One-to-One Consultations

All students are allocated an advisor for the purpose of registering for classes and monitoring their learning and general well-being while at university. First year students must meet with their advisors at least once per month and are encouraged to do so more regularly. At the time

of registration, freshmen have access to a senior student mentor who can interpret between them and their advisor and help with advice on study. By the end of the first semester, freshmen should have met their advisor for three or four individual meetings, focusing on their progress across the curriculum. However, the function of the "advisor" is (in my experience) mainly administrative and does not routinely include detailed attention to the student's learning needs unless students request it or unless they are failing. Since several classes include tasks such as "interview a lecturer about their special area" or "survey the opinions of foreign faculty" students are also likely to have visited at least one other professor's office to ask about that professor's special subject area. In addition, if students are having difficulty understanding something in class, they are encouraged to follow up by visiting the professor in office hours to ask a question. This is particularly necessary when students are learning to use new apps for the reading course or creating e-portfolios. Last but not least, some students visit in order to practice conversation skills, even making a goal of visiting a different professor every day. This allows self-motivated students to develop their oral skills and academic knowledge rapidly.

However, for those less fluent or less confident in English, visiting a professor's office, even with a friend, can be challenging. We find that according to a study of students at Oxford University, even the elite students at Oxford University worry about what to say and do in tutorials:

> For many…. the greatest anxiety is quite simply not to know exactly what it is that their tutor expects from them in each tutorial.…. In most cases it is only… after 2 or 3 terms that students say they are entirely sure about what they expect to do in, and take away from, their tutorials. (Clarke, 2008, p.93).

While MIC is less demanding than Oxford, students the world around are observably anxious especially the first few times they visit their professors' offices. Moreover, foreign language anxiety is phenomenon that has been widely researched. (Kimura, 2008, p. 173). Further research into how students use one-to-one consultations might reveal more about whether they need further support and whether students and teachers have similar expectations or not. On the plus side, the first few compulsory visits to the advisor build up familiarity, which makes it easier for students to visit. In addition, students are encouraged to

visit voluntarily either to get clarification about projects or to practice English. Students who do this are enthusiastic about it. Teachers generally make an effort to be approachable. But many students still seem to experience nervousness about speaking and listening to English and some rarely make it to the teacher's office on a voluntary basis.

Social Learning Spaces

The term social learning spaces has come into vogue to emphasize the social function of learning centers. Murray writes about how the learning space has become a place where students use English and also create relationships and feel they belong. (Murray, 2018, p. 108). This is particularly important for overseas students who may not be able to speak Japanese well enough to integrate socially outside class. The most visible social learning space at MIC is the International Lounge. It is used for a bi-monthly "World Café" hosted by students with the support of the International Centre. The world café was instituted to encourage friendship between domestic and overseas students. Attendance varies from about 10 to 20% of the freshmen. The space is otherwise used for students to do their homework and hang out. It generally has a rather studious atmosphere. Further research could be carried out into how the International Lounge, ARC and library are used.

Self-Directed Learning within the Curriculum: Akita International University and Kanda University of International Studies

In this section we will draw on accounts of self-directed learning at two universities in Japan which have very different approaches to ours at MIC, with a view to gaining a better understanding of what processes and environments were found to encourage self-directed learning elsewhere. The two universities studied are much larger than MIC. They have larger self-access facilities. On the other hand, MIC has the luxury of a high teacher: student ratio and presence of relatively large numbers of "content experts" on campus.

One of the first educators to report on self-directed learning in Japan was Garrold Murray of Akita University of International Studies (Murray, 2009, in Smith & Strong, 2009, p. 61-70). Akita International University established a Self-Access Learning Center (SALC) in 2004, with Murray as its first director. Murray emphasizes the importance of *how* spaces

and resources are used, and of offering real choices to students when they are learning to take control of their own learning. In his study, Murray describes a compulsory foundation course that is taken as a pre-requisite to Global Studies/Global Business studies and taught in the SALC and assessed by portfolio. Students learn to make an inventory of their skills and write a language learning autobiography, before moving on to make a plan for work they will carry out in the SALC centre. Each class meeting begins with a 10-minute mini-lesson focusing on topics such as how to do self-evaluation and how to find resources, followed by 80 minutes of self-study during which the professor is on-call. Other topics covered include: how to find and use materials, how to set a specific and realizable short-term goal and how to measure one's own progress in relation to a specific goal. Students keep logs and report on their progress to their professor every two weeks. Their portfolio includes weekly logs with evaluations of which materials helped them to achieve their learning goals and final written reflection about whether their views on language learning have changed during the course. Murray emphasizes the principles of planning, reflection, support and personalization, which guide the process at Akita. One interesting feature is the fact that grades are negotiated and students are graded on their ability to make and carry out a study plan rather than on their progress in language skills.

In end-of-course feedback on the course, students remarked on developing increased ability to talk in English to proficient overseas students on their campus, increased ability to understand humor, better reading speed. Murray notes that, from the instructor's point of view, the change from teacher to facilitator is challenging. Murray comments on the difference between the role of teacher and advisor: "As a teacher, one of the biggest challenges I faced was relinquishing control of the learning to the learners...I realized that the starting point of my work for this course had to be their understanding of how they learn." (Murray, 2009. p. 67). At MIC there might be a lack of personnel for implementing a course like this but some features could be borrowed or adapted, as we will see below in the final section of this paper.

Kanda University of International Studies (KUIS) has had a self-access learning center since 2001 (KUIS homepage), although the development of credit-carrying courses was somewhat later. Freshman orientation to the SALC takes place during class time as a required part of the first semester compulsory, credit-carrying language course. There are also

one-off workshops which students can attend at the SALC for interest or for fun, and workshops which can be requested by teachers to deal with topics like "motivation" or "research skills". A further, credit-carrying course called "Effective language learning" has also been developed as an optional course which can be taken by students of various years (Mynard & Stevenson, 2017). There are also modules in self-access learning which are optional and not for credit. Kanda has a team of advisors who are on hand full time and are also engaged in research, trialling and reporting on various initiatives. They have developed out-reach through materials such as posters, handouts and the SALC website (including a group on social media) to increase students' awareness of self-directed learning as well as "learning tools" such as diagnostic tests, activities designed to help learners to set goals and implement a plan of self-directed study, readings/questionnaires and worksheets on motivation. (Kato & Mynard, 2015).

A hallmark of the program at Kanda is its emphasis on the development of programs hand-in-hand with a research agenda. This has kept the program accountable both to students and management. Developing the curricula and materials takes a lot of time, effort and commitment. Although the creation of a large study centre and hiring a dedicated team of advisors might not be suitable for MIC, there may be some useful strategies which can be adapted to fit MIC. The details might depend on initiatives and willingness of individual teachers to participate in fact-finding about the current state of self-directed learning at MIC and on what kind of the student needs they identify. It is noteworthy that before credit-carrying self-access course was opened to all freshmen at Kanda (KUIS), versions of it were carried out voluntarily on a trial basis by interested professors.

Conclusion: Suggestions for Further Exploration of Self-Directed Learning

By looking at accounts of self-directed learning courses at other universities, we have been able to identify some common elements. These basic courses emphasize learning-to-learn, to the extent that students are graded on their ability to carry through their learning plan rather than progress in language skills. As we saw when comparing active learning with self-directed learning, the capacity to make one's own goal and measure one's progress, is not something that comes naturally to all students. Students at MIC have some robust support systems including the advisor system, but some students are still lacking in self-directed learning skills at the end of their second year. One possibility which could be explored is the development of materials to stimulate self-directed learning by individual teachers, for

example by piloting and sharing diagnostic materials, asking students to write language learning histories and make learning plans. Following the principles outlined by Murray (2009), the emphasis would be on planning, reflection, support and personalization of learning. Stronger links could be created between class learning and out-of-class use of English by creating homework tasks which include options such as a visit to the ARC or World Café. ARC could benefit from being linked with an on-line social network which is not confined to individual classes, to stimulate those students who are keen but shy or isolated in their own class. Borrowing from KUIS, the ARC environment could be enriched by posters and fliers addressing topics such as goal-setting, how to deal with learning anxiety and how to self-motivate. In order to help students to approach advisors, and non-Japanese-speaking classmates, topics such as "How to visit a professor's office" and "Intercultural Awareness" could picked up in workshops during freshmen orientation period. At whole-school level, a survey of students' perceived needs might also help to give insight into how students are using the one-to-one consultations and learning spaces already available and how they experience the challenges of adapting to the English-medium environment. It would be useful to know students' feelings on their needs and preferences for paper-based resources and real or virtual spaces for English study. Further investigation could include effectiveness with respect to catering for diversity, considering that MIC has students of various language backgrounds and extreme ends of the English/Japanese language ability/IT ability spectrum. Further research might help us to understand why not all students improve equally, and help those who do not.

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Monetary Integration Challenges in Asia-Pacific Region

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Abstract

Monetary integration in Asia has been a hot topic for years. Proponents justify regional cooperation by proving a range of benefits. The importance of their arguments stems from the fact that exchange rate instability plagues Asian countries. The competitiveness of Asian economies, which are export-oriented, relies on exchange rates. In the past, macroeconomic stability was achieved through the use of hard pegs. However, the costs of fixed rates called for alternative solutions. Instead, for national regimes in the Asia-Pacific region it may be feasible to introduce a common basket peg, or even a common currency, to cope with exchange rate-related problems. Successful management of regional policy may lead to an Asian Monetary Union and would not be easy. Not only must economies converge, but a great deal of political will and solidarity would be required. This paper discusses alternative solutions and offers a correlation analysis of business cycles showing the current situation in Asia.

Keywords: ASEAN, exchange rate, monetary integration, monetary policy coordination, trade.

Introduction

Asia has emerged as a global power during the last 25 years. Over this period, the region has been characterized by high levels of foreign direct investment that fueled incredible economic expansion. Factors contributing to growth have been numerous, but low labor costs and fewer regulations (including a lack of environmental protection laws) have been recognized as beneficial and therefore attractive for relocating global production to Asian countries. Socio-economic success materialized through the improvement of living standards

over a relatively short period of time. This, in turn, provided grounds for discussion of possible regional solutions with regard to economic and monetary integration. After successful implementation of the ASEAN initiative, economists and governments in the region have analyzed scenarios of monetary integration. The success of the Economic and Monetary Union (EMU) in Europe has driven the popularity of monetary integration in Asia until recent years. There is a vast amount of research concerned with various designs of the monetary system in Asia.

Problem

Monetary integration, regardless of the region of the world it covers, has been a hot topic and has been gaining in popularity. This is in spite of the fact of fast expansion of currencies issued online, which has been beyond national government control.

The literature most often lists Japan, South Korea, Taiwan, Hong Kong, Indonesia, Malaysia, Singapore, China, Thailand and the Philippines as members for Asian monetary integration (Yuen, 2002; Williamson, 2005; Eichengreen & Bayoumi, 1996). A list of potential member states of the currency union in Asia tends to differ from study to study. For instance, Eichengreen and Bayoumi (1996) also include Australia and New Zealand in their analysis of correlations. Different sets of countries are considered for the purpose of answering questions on the optimal composition of a new monetary union. Optimality is defined here with utility function maximizing potential benefits for monetary union members. The above list is concise and represents the focus group for this research.

Demand for monetary integration within this group stems from a desperate need to achieve exchange rate stability. Such an attitude results from the fact that all of these countries belong to highly open small economies. As a consequence, economic performance depends heavily on the external value of their respective national currencies. The Asian currency crisis of 1997 was a problem resulting mostly from rigidity of exchange rate regimes (Hefeker & Nabor, 2002). This rigidity is also a result of the disproportionate share (in currency baskets) assigned to the dollar (Rajan, 2002). The currency crisis of 1997 raised the question of finding a valid solution to the myriad of exchange rate problems suffered by Asian countries. The goal of this paper is to present various arguments for monetary integration in the region and possible solutions to the problem of effective monetary cooperation.

There have already been many studies that have discussed various methods of achieving exchange rate stability. They have included exchange rate regimes based on fixed and flexible rates, currency basket-based regimes, and the idea of a common currency for selected countries in Asia.

Current Asian exchange rate regimes range from hard peg to free float systems. The former approach is still in use, despite the Asian currency crisis having resulted from rigidity of fixed exchange rates (Hefeker & Nabor, 2002). This is justified by the fact that the main benefit of hard peg is that of "reducing uncertainty in trade and investment" (Hefeker & Habor, 2002, p. 3). Stability in the external value of domestic currency reduces the risk in international business. The variability of exchange rates greatly affects the competitiveness of products exported. Instable international capital flows and current account reversals put the financial stability of a nation in question. Prevalent during the currency crisis in 1997 were many competitive devaluations (Hefeker & Nabor, 2002, p. 4). As argued by Mc Kinnon (1998), Rose (1998), and Hefeker and Nabor (2002), such countermeasures added to macroeconomic instability in Asia. One may claim that a hard peg regime effectively solves most of the above-mentioned problems. The popularity of fixed exchange rates in Asia is attributed to a long history of successful economic performance under such regimes. Limiting exchange rate fluctuations created instability. Governments in the region, however, and global institutions are still on a quest to achieve macroeconomic stability for the sake of each society's wellbeing.

Objective

The objective of this paper is to provide a review of opinions on monetary integration in Asia and an evaluation of possible forms of international cooperation in the area of exchange rate regime in the region. In terms of specific contribution to a discussion of available scenarios an objective is to offer a simple argument based on a correlation of business cycles among potential members of an Asian Monetary Union.

Methodology

Monetary integration is an international economic policy issue. Any study in this area must draw heavily from literature and contemporary political discussion. However, in addition

to a systematic and diligent literature review, this paper offers a very simple empirical investigation of business cycle correlation among potential members of an Asian Monetary Union. Real GDP growth rates (annual observations) are the basis for calculating correlation coefficients between pairs of countries. For the purpose of presenting significant changes to the underlying situation and eligibility of Asian countries to create an optimum currency area (according to classical OCA theory), correlation coefficients are presented separately for three distinctive sub-periods over the last 113 years. Time series employed in the empirical exercise come from GAPMINDER database.

Result and Discussion

The external value of domestic currency does not need to be fixed. There is an option to employ the most self-sustaining solution in the form of a free float. However, to have a flexible exchange rate, a set of conditions must be met. One should note, however, that free float is not a solution for small economies. The most successful countries with freely floating exchange rates are those with the largest share in the global economy. Only in a stable and well-developed economic system do free market forces grant stability to the external value of a domestic currency. Deep foreign exchange markets with millions of transactions and high turnover seem resistant to speculative capital flows and any other forms of market mechanism deficiencies.

According to Cowen et al. (2006, p. 46) exchange rate management marked by flexibility is likely to foster regional integration. Therefore, Asian countries would still be able to pursue national agendas without losing autonomy in exchange rate policy. Debate on monetary integration in Asia centers on an analysis of hard peg versus flexible exchange rate regimes. Fixed rates with the same peg (probably pegged to the US dollar) can be a phase in the transition to a common currency. On the other hand, remaining in a system that fuels exchange rate volatility is likely to negatively influence international transactions (trade and investment) due to inherent uncertainty (Cowen et al., 2006, p. 45).

The fundamental problem in designing and introducing monetary integration in Asia is the scale of collective action required. Since the emergence of a "common currency" as an idea for ASEAN countries, there have been many alterations in expressed willingness to proceed

with monetary cooperation. There was initially high solidarity followed by strong resistance, as there were local economic problems and a global financial crisis that called for drastic countermeasures at the national level.

These days it may be difficult to find many Asian countries that are still willing to engage in close forms of monetary cooperation. Currently, each country pursues and retains its own monetary and exchange rate policies, thus maintaining full autonomy in this regard. However, there are still researchers who analyze monetary cooperation and integration scenarios for Asian countries. There is one point found in the literature, as early as 2002 with Hefeker and Nabor (p.1), that has received substantial attention. It is about a system based on a basket peg. Williamson (2005) offers the idea of either each country having its own basket peg, or the creation of a single basket for pegging all Asian currencies. A different approach is advocated by Rajan (2002). He proposes implementation of the Japanese government's plan to introduce a tri-currency basket peg for East Asia. It would be composed of the most important international currencies for trade and investment, which are the dollar, the euro, and the Japanese yen. It should be noted that currency pegs, in general, lead to more positively correlated business cycles (Frankel & Rose, 1998). This may be perceived as a substantial benefit to all countries involved in such forms of exchange rate cooperation. At the same time, achieving high symmetry in business cycles would facilitate further attempts to reach full monetary integration.

Fixed exchange rates are characterized in the literature as having a few disadvantages in special circumstances. Listing just the most prominent ones here, one should point out a loss of autonomy for national governments with respect to the external value of the local currency and the requirement for setting an anchor currency, both of which may prove challenging. Another problem, should some adjustments become necessary, results from further changes to the exchange rate. Changes or a withdrawal from the fixed exchange rate regime could generate a currency crisis and result in loss of credibility of the national government or its specialized agency responsible for managing exchange rate policy (Hefeker & Nabor, 2002, p. 5).

In spite of the introduction of a common basket peg for Asian countries being the most realistic, there are many objections. These doubts stem from different compositions of export and import-related flows along with diverse foreign direct and portfolio investment

transfers in all potential members of such an exchange rate arrangement. Within such a common basket, shares in the Japanese yen, the dollar, and the euro are difficult to calibrate in such a way that suits all Asian countries involved. In particular, the Japanese yen is commonly used for invoicing intra-regional trade. Also, the denomination of sovereign debt issued by Asian countries has shifted from the dollar to the yen. However, the US dollar still retains significant influence when it comes to exchange rates in the region (Eichengreen & Bayoumi, 1996, p. 5). A collective basket may be a feasible solution in the mid-term, however. Hong Kong and Singapore, as very small and highly open economies with strong trade links with their neighbors, may find it more appealing to peg the external value of their respective national currencies to other East Asian currencies (Eichengreen & Bayoumi, 1996, p. 10). Eichengren and Bayoumi (1996, p. 11) noted that the country pairs consisting of Singapore and Malaysia, Singapore and Thailand, Singapore and Hong Kong, Singapore and Taiwan, and Hong Kong and Taiwan, would most benefit from a common external peg. Another group that includes Indonesia, South Korea, and the Philippines exhibits a weaker case for benefits stemming from a common hard peg. While the concept of a collective hard peg for Asian countries has been studied for many years, there is still no credible plan for achieving such a form of regional cooperation.

A common basket peg for all the Asian countries within this analysis has a convincing rationale. It seems that after many years of fascination with economic integration, the world economy has entered a period of opposite tendencies in many regions. Not only Brexit, but also the main themes of the US presidential campaign in 2016, prove that societies are willing to support separatist initiatives. Voters support leaders who promise to protect national economies by imposing barriers to trade, controls over investment, and restrictions to the flow of people.

According to empirical investigations available in the literature, should each Asian country peg its currency to one of the G-3 currencies, greater exchange rate stability would be achieved (Cowen et al., 2006, p. 46). As a side effect, such regimes would guarantee that any changes in "the third country exchange rates would [not] disturb the trading relationships among the East Asian countries themselves" (Williamson, 2005, p. 1).

An alternative solution, based on a basket of currencies to which external value of national currency is pegged, is tailoring individual baskets for each Asian country. Such a country-specific basket would be composed of international currencies as well as the currencies of neighboring countries in the immediate region. It can be argued that tailoring currency baskets on the basis of currency composition of international trade and investment would be better adapted to the features of each specific country. This would probably reduce intraregional exchange rate variability, in turn promoting trade and investment (Cowen et al., 2006, p. 46). When it comes to technical issues related to a country-tailored currency basket, one should bear in mind that for each country involved, even a small one, the country would need to operate its own forward market for foreign exchange. This has always been problematic for smaller countries (Williamson, 2005, p. 2). Williamson (2005) claims that this problem would be effectively solved through the introduction of a formerly presented exchange rate regime based on the common basket for all Asian countries. Still, developing the most appropriate weights to compose such a basket would be somewhat challenging (Cowen et al., 2006, p. 48).

The two forms of fixed exchange rate regimes using a currency basket (the common basket and the tailored one) represent two similar solutions aimed at limiting exchange rate variability at the cost of national economic policy independence. This issue may be even more problematic as international capital mobility might also be affected, as derived from the "impossible trinity" rule (Cowen et al., 2006, p. 45). The exchange rate regime options for Asian countries discussed above would reduce independence in monetary policies as long as capital flows remain unrestricted. In this case, they are subject to government control. "...[R]egional integration may in the end be held back if countries are forced to trade off domestic stability for deeper trade linkages" (Cowen et al., 2006, p. 48).

Adapting an exchange rate regime that employs a collective currency basket and a hard peg requires a great deal of solidarity and political will. There is a need for a very good understanding of all benefits and trade-offs that are involved in such a new arrangement. Prospective forms of exchange rate and monetary cooperation in Asia still require a systematic analysis at the national level and at the regional level. Proper and competent information campaigns are required to gain common acceptance for new forms of international cooperation.

A reason for achieving good public understanding of this new regime is to avoid populists gaining the attention of the public. Even the most developed countries, like the UK, have witnessed populists, propelled by misunderstandings and ignorance, playing against coordinated international initiatives. Therefore, all countries that wish to embark on a quest for stability and prosperity by means of monetary and exchange rate cooperation must approach the marketing of these ideas to the general public with due diligence and care.

Shaping an appropriate mentality in societies and generating readiness for sacrifice, especially at the beginning of monetary integration, are necessary for successful implementation of any initiatives of this magnitude. It can be argued that East Asian countries still lack political solidarity in 2017. However, the same problem was recognized as early as 1996 (Eichengreen & Bayoumi, 1996, p. 21). This is simply an impediment that needs to be addressed by conscious and responsible public marketing.

How far are we from an Asian Monetary Union?

The various factors and conditions mentioned above lead to the fundamental question of the feasibility of a monetary union among Asian countries. There has been a consensus that an Asian Monetary Union (AMU) could be potentially beneficial. However, it is an initiative that requires lengthy and gradual reforms at national levels. This kind of economic integration of diverse national economic systems calls for a great deal of political will and requires a longer time line for its successful completion (Cowen, et. al., 2006; Hekefer & Nabor, 2002; Yuen, 2000).

Economic policy implications resulting from monetary integration in Asian countries would differ due to a variety of factors. Smaller currency areas to be formed in Asia are also advised (Yuen, 2000, p. 16) as a viable option. It may be easier to have several groups of fewer countries that coordinate their monetary policies first, and then these small 'currency unions' could more easily achieve external harmonization with other currency areas in the region. Yuen (2000, p.3) claims that factors facilitating such a scenario are "the symmetry of underlying [economic] shocks, geographic proximity and socio-cultural compatibility". By using such criteria, it has become possible to recognize three potential groupings of Asian countries for the presented alternative two-stage monetary integration scenario. These separate clusters

would comprise : Singapore and Malaysia, Japan and Korea, and Taiwan and Hong Kong (Yuen, 2000, p. 12).

There are still many impediments to the Asian Monetary Union becoming a reality. As argued by Takeuchi (2006, p. 1) there are still significant disparities among Asian economies. Differences in industrial structure and the efficiency of factor markets (labor and capital markets) drive the costs of adopting a common currency in the region. Associated reasoning and arguments of the role of such differences stem directly from the original Optimal Currency Areas (OCA) theory. These differences are responsible for a higher probability of asymmetric shocks and resulting mismatch between economic situations in each member state and the common monetary policy. However, these arguments against monetary integration in Asia may simply be an overreaction to the advice formulated by the OCA theory. As already observed before the introduction of the euro by Eichengreen and Bayoumi (1996, p. 15-16) the labor markets of East Asia are more flexible than those of Western Europe. Monetary integration in Europe generated benefits for member countries. The member countries have had conditions far from optimal for those advised by the OCA theory. It is more reasonable and justified to implement monetary integration in Asian countries that are closer to satisfying the OCA criteria. Asian countries are much more economically homogeneous than those of Europe. The probability of asymmetric shocks is therefore much lower. The low probability of Asian countries exhibiting unique asymmetric shocks creates a situation conducive to national governments in the region. There would be no other choice but to pursue similar (if not identical) policies across the region. In such a case, there is no reason for conflict of interest among potential member states. Joint and coordinated fiscal adjustments, along with a common monetary policy, seem highly feasible. Such a situation would allow Asian countries to form a successful monetary union (Yuen, 2000).

The main impediment for monetary integration in Asia is still a lack of political will, political solidarity, and consensus regarding regional institutional infrastructure (Rajan, 2002). Other impediments result from China's asymmetric shocks, due to many factors, but mainly because of different production structures and a unique economic model pursued by the Chinese government. This is why there has been a low correlation between the Chinese business cycle and the cycle of other Asian economies (Yuen, 2000, p. 12). Impediments to monetary integration in Asia are also of a political nature. European monetary integration was

marked with increased political integration along with the creation of a supranational body (Eichengreen & Bayoumi, 1996, p. 18). The European Central Bank was able to override national governments who reached consensus on relinquishing independence of monetary policy. In 2017, after 21 years since Eichengreen and Bayoumi (1996, p. 19) formulated their comments on Asian monetary integration, countries in the region still lack understanding and the initiatives necessary to bring about greater solidarity and political cooperation. There must be much more trust and cooperation for an Asian Monetary Union to emerge.

Another empirical test for the viability of monetary integration in Asia?

The classical OCA theory advanced several optimality conditions for a group of countries to engage in monetary integration. Generalizing OCA criteria leads to the conclusion that high positive correlation of business cycles is a pre-condition for a shock-less substitution of domestic monetary policies with a common one. Therefore, in order to get a better image of the suitability of Asian countries engaging in such integration, one could take a closer look at correlations of their business cycles over the last few years. A simple empirical investigation on the feasibility of an Asian Monetary Union delivers correlation coefficients of real GDP growth rates for China, Indonesia, Japan, Korea, and Malaysia. Using long time series for real GDP from the GAPMINDER database, correlation coefficients were calculated for three different periods: 1900-1989, 1999-2004, and 1990-2013.

Table 1 Correlation of real GDP growth rates among Asian countries over the period from 1900 to 1990

	China	Indonesia	Japan	Korea, Rep.	Malaysia
China	1.00				
Indonesia	0.6	1.00			
Japan	-0.16	0.08	1.00		
Korea, Rep.	0.26	0.42	-0.13	1.00	
Malaysia	0.01	0.09	-0.10	0.07	1.00

Source: Author, based on GAPMINDER database (www.gapminder.org)

Table 1 presents correlation coefficients for the longest period considered (1900-1989). It indicates that over the period of 90 years in Asia, business cycles in all countries included in the empirical exercise were neither positively nor negatively correlated. Coefficients that are not significantly different from zero suggest total independence in the way these economies grew over time. However, as empirical investigation advanced with the periods covered, a very new situation was revealed for all considered Asian countries.

When correlation analysis is restricted to a shorter period - from 1999 to 2004, results (Table 2) seem to indicate a much more pronounced similarity in business cycles, with China and Japan still walking their growth paths independently.

Table 2 Correlation of real GDP growth rates among Asian countries over the period from 1999 to 2004

	China	Indonesia	Japan	Korea, Rep.	Malaysia
China	1.00				
Indonesia	0.43	1.00			
Japan	-0.04	0.57	1.00		
Korea, Rep.	0.17	0.84	0.44	1.00	
Malaysia	0.49	0.90	0.57	0.86	1.00

Source: Author, based on GAPMINDER database (www.gapminder.org)

Then, including the most recent period of economic growth up until 2013 (Table 3), shows a new situation. All of the considered national economies achieved a much stronger positive correlation of their respective business cycles over the last 27 years. What may be responsible for such a significant change is a common and similar response to the most recent global financial crisis. However, as surprising as it is to see Japan and China with positive correlations in their business cycles, such a result is a strong supporting argument for potential monetary integration in Asia. Previous negative correlations were a strong argument for opponents of an Asian Monetary Union. These negative correlations provided ammunition to dismiss any ideas of a common monetary policy for the two prominent economies.

Table 3 Correlation of real GDP growth rates among Asian countries over the period from 1990 to 2013

	China	Indonesia	Japan	Korea, Rep.	Malaysia
China	1.00				
Indonesia	0.55	1.00			
Japan	0.22	0.49	1.00		
Korea, Rep.	0.44	0.55	0.58	1.00	
Malaysia	0.40	0.79	0.75	0.77	1.00

Source: Author, based on GAPMINDER database (www.gapminder.org)

Indonesia and Malaysia are highly positively correlated, as well as Korea and Malaysia, and Korea and Indonesia. All correlation coefficients seem to drift in the same direction. All of them are statistically significant. Common monetary policy, as is conducted in a monetary union, can be effective and beneficial for all member states as long as it suits them all at the same time. Therefore, it is important to achieve high synchronization of business cycles prior to commencing with monetary integration. Otherwise, monetary policy will generate asymmetric shocks and will be responsible for increased macroeconomic instability. Presented pairs of countries show high and growing similarity in terms of their business cycles. One could even think about the feasibility of small cluster unions, as proposed by Yuen (2000).

Conclusions and Recommendations

There have been cycles in the popularity of monetary integration in Asia for many years. Every time there has been turmoil due to regional crisis or global recession, national governments have abandoned previously worked-out plans for closer regional cooperation. As has been discussed above, any economic integration initiatives, not only in the area of money and monetary policy, require a large dose of political will, international solidarity, and well-devised public marketing campaigns to proceed. These observations flow directly from the European experience and role model created by the EMU in Europe.

An Asian Monetary Union (AMU) is a long-term commitment requiring cooperation among countries that share difficult and painful histories. However, in this regard, potential members of an AMU are not very different from those of European countries. The difficult

history of European nations was addressed through appropriate education and diligent arguments supporting integration initiatives. In this way, it became possible to overcome historically developed animosities.

Another conclusion is that designing and implementing a monetary union in Asia would require full time engagement of all stakeholders. Formation of a monetary union in Asia may not be feasible today due reasons presented earlier. However, empirical tests suggest that after a century (1900-2000) of independent economic growth, Asian countries witness real convergence of business cycles. This, in turn, creates a very different situation for a discussion on the feasibility of regional monetary integration. Impediments that previously existed seem to diminish, or even transform into supporting factors.

Economic stability of Asian countries would increase greatly due to monetary integration and an exchange rate regime based on a common basket with a hard peg and later on the creation of a new common currency. Policy formation in small steps and the testing of alternatives seem to be the most probable scenario. Careful and well-informed political decisions have a potential to save Asian countries from potential threats to their stability on their path toward a full monetary union.

Due to the very nature of Asian economies, exchange rate stability remains the central issue for the whole region. Current exchange rate regimes allow national governments to retain some autonomy in their respective monetary policies, but in a highly globalized world, this would become less and less possible. A monetary union is an alternative for achieving external stability, but would cost national governments the loss of ability to shape monetary policy. However, potential benefits may outweigh such costs. The example of the EMU should be used as a reference. European governments seem to do well in a situation where union-wide authority (the European Central Bank) manages the common currency and conducts monetary policy that in fact suits all of member states. In addition to expanding knowledge and understanding the gist of monetary integration among citizens and politicians, governments should invest some of their resources in developing long-term economic integration plans. These schedules should, in turn, include the design of institutional and political infrastructures to facilitate further economic and monetary integration for the sake of Asian nations.

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International Capital Flows and Stock Market Performance: The Case of Oman and Kazakhstan

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Abstract:

The paper focuses on the performance of local stock markets in two oil-producing countries with different economic history and diverse political background. We try to associate stock exchange developments in the most recent period with international capital flows. Kazakhstan pretends to be the economic and financial hub of Central Asia. Oman is an economic hub of the Arab Peninsula, with a significant role in global supply chains. With unquestionable economic potential in both cases, and with tailored economic policies along with political stability one can argue that both countries are on their way to local domination. The last global crisis, originating from the US sub-prime loan problems has taken a great toll in Kazakhstan, resulting in the deterioration of stock market performance. However, it was not the case for Oman. We ask a question: to what extent is the observed stock market behavior a result of international capital flows, and to what extent is it driven by local factors? The answer is based on a systematic and rigorous regression analysis between proxies for external factors and stock market performance. We use the official stock exchange databases and Balance of Payments Statistics provided by the IMF for information about foreign capital flows to and from the countries of interest. Results allow for a set of conclusions that may serve both domestic policy-makers and international investors interested in taking long positions in two respective stock

markets. In both cases we observe small open economies, with a financial sector highly sensitive to international capital flows in case of Kazakhstan, and a much less sensitive one in case of Oman.

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Introduction

There are a multitude of empirical studies on emerging economies that focus on external financing issues. The reason is in a well-known fact related to lack, or shortage, of domestic savings in such countries. The importance of foreign capital for domestic production function can be traced back already in the classical model. However, there are also problems with external financing of developing countries, as pointed out explicitly by Stiglitz (2002) in his prominent critique of globalization. Liberalization of the balance-of-payments accounts creates many potential risks for emerging economies. These risks materialize when external or internal factors undermine confidence in the underlying developing economy and result in sudden stops and reversals of capital flows. We would like to tell a story of the unique cases of the Republic of Kazakhstan and the Sultanate of Oman and their domestic stock market performance with comments on the specific role of capital flows over almost the last 10 years.

Goetzman and Jorion (1997) propose socio-economic reasons driving investments in stock markets in the 20th century. They suggest that the demographic factor of being a "baby-boomer", concerned about the future post-retirement income (and consumption), may fuel a specific pattern of behavior. This is simply: (1) saving more of the current income, and (2) investing it in financial assets with an absolute and relative higher rate of return. As a consequence, the appreciation of financial assets results not from the ability to generate cash flows by the underlying real assets, but from continuous inflow of capital, fueling prices. We support their claim and we extend it beyond the year 2000. As most developed countries suffer from public pension system deficits, with growing potential for their bankruptcy in the future, rational agents seek to diversify post-retirement income sources and hedge against the risk of default. This in turn means that private voluntary savings increase. With the available technology along with liberalized financial accounts in most countries, the capital flows "there

and back again" seeking the maximum rate of return in the global scale, visiting emerging economies. Therefore, we claim that the observed performance of stock exchanges in developing countries is highly sensitive to international capital flows. International investors have potential for fueling financial asset appreciation and even for destabilizing foreign stock markets, when discouraged or frightened.

According to Henry and Kannan (2006), there are two main reasons driving investors' decisions about taking long positions in financial assets issued in developing countries. The first one is derived directly from the portfolio theory: stock market returns in emerging economies have a low correlation with returns in industrialized world. Diversification opportunities create a potential for higher profits at a reduced level of risk. The other argument coming from "conventional wisdom" states that investments in developing countries offer greater opportunities due to absolute higher growth rates. As formulated by Malkiel and Mei (1998) or Mobius (1994), due to higher expected economic growth rates in emerging economies, the long-run expected rates of return on investments are also above of the level projected for developed countries. The empirical analysis, however, undermines this proposition (Henry and Kannan, 2006, Fig 8.1, p. 241). Not only is the sign of the relationship between the average GDP growth rates and stock market returns insignificant, but it also turns negative. The Republic of Kazakhstan, despite not being covered by the mentioned study, is not an exception. Despite the fact that it has been growing relatively and absolutely faster than most other economies in the world in the post-2008 period, the stock market performance did not mirror it, as could be expected.

Asian economies have represented a puzzle for economists due to their ability to maintain higher growth rates in the long run. Krugman (1994) explains this phenomenon for Asian Tigers, offering an argument that there has been rapid capital accumulation made possible by the thriftiness of their populations. This argument counters suggestions about growth fueled by the changes in the Total-Factor-Productivity. Such an interpretation may be valid for East– and South-East Asian countries, but again fails when used in explaining the performance of the Republic of Kazakhstan. In this particular case, there may have been many more factors in play that are responsible for the observed macroeconomic results. The Soviet-Union heritage has made it relatively easy to achieve high absolute rates of GDP growth in the mid-run. An abundance of natural resources, on the other hand, has been a very good insurance

against sudden stops and international liquidity problems that have been detrimental for economic growth and development in most African countries for decades (Mlodkowski, 2007).

One may argue that, in case of emerging economies, the fast accumulation of capital has lead to a systematic decrease of its productivity. This may have been true for middle-income countries, with no prior experience with communism. However, for post-Soviet Union cases, there has been much of the hidden growth and productivity potential that have been released over the most recent period. A brief economic history of the Republic of Kazakhstan, offered below, has been intended to give hints about the situation and its consequences for the results we obtain in the empirical study.

Modern Economic History of Kazakhstan

The declaration of independence of the Republic of Kazakhstan in 1991 marked the beginning of a new period of development of this Central Asian country. It started to reform and to develop towards a market economy. By this time, the administrative and central planning system in the Soviet Union has already been completely discredited. In fact, this system brought all Soviet Union republics to the point of economic implosion. Perestroika, launched in 1987 by Mikhail Gorbachev, was a reorganization of social and economic relationships. This reform was intended to bring economic liberalization and democratization of social processes. However, it could not prevent the fall of industrial and agricultural production (Ayaganov, et al., 2010, p. 118). In addition, the negative impact on the economy of Kazakhstan caused a substantial difference in the distribution and level of development of productive forces. The major industrial and high-tech final stage production had been located in the western part of the USSR. The rest of the Soviet Union, including Kazakhstan, played the role of raw material appendages (Ayaganov, et al., 2010, p. 119).

After the collapse of the Soviet Union, the new independent states have realized all the negative effects of raw material-oriented economy. We can say that at that time all large-scale mining companies in Kazakhstan found themselves without demand for their output. The existing production facilities were obsolete and therefore, unable to process raw materials up to the standards suitable for marketing in international markets. The industries of the former Soviet Union, previously the major consignee, were in decline, and demanded no raw materials

extracted in Kazakhstan (Masanova 1999). In turn, a collapse of industrial giants in Kazakhstan caused a "domino effect" domestically (Masanova 1999). One after another, the decline spilled over to the services sector, retail, health care, etc. (UNDP, 1995, p. 68).

The decline in industrial production, and the resulting shortage of consumer goods, led to unprecedented inflation due to unrealized accumulated purchasing power and the fact that the central government budget deficit was financed directly by a central bank. The peak of this inflation was when Russia introduced its new currency in early 1993. Kazakhstan remained in the ruble zone until November 1993, so the domestic production and financial system of Kazakhstan were highly dependent on the monetary policy of Russia. As a result of the introduction of the new Russian currency, both countries signed an agreement on the parallel circulation of the two types of new Russian rubles banknotes and the old Soviet rubles. However, the agreement has not been fulfilled.The new Russian Ruble did not come to Kazakhstan. Instead, the huge mass of old Soviet rubles flooded into Kazakhstan bringing a wave of hyperinflation (Ayaganov, et al., 2010, p. 221). Due to the hyperinflation, the demand for capital in this initial period of independence was low. The society lost trust in the legal tender and most of the transactions were based on bartering.

An important step in the process of economic reforms was the creation of the country's financial system. On the eve of the declaration of independence, a financial system based on market mechanisms did not exist in Kazakhstan. Before 1991, the Republican Bank, despite its name and status, was actually only a branch of the Soviet Union Bank. The Board and the central administration were located in Moscow. The rules of a centrally planned economy were in place and a monetary policy along with the basic strategy for the banking system were formulated without Kazakh contribution. Operations were reduced to following instructions received from Moscow (Ayaganov, et al., 2010, p 219). At time of Soviet Union, there was no need for a domestic, independent financial and credit policy. It was already in early 1991, when the "Law On Banks and Banking Activity in the Kazakh SSR." was passed. Under this Act, the Republican State Bank was transformed into the National Bank of the Republic of Kazakhstan. In addition, the Union Industrial Bank branch offices were changed into Republican banks as: Promstroibank, Zhilsotsbank, Agroprombank, Vneshtorgbank (National Bank of Kazakhstan, 2001, p. 8). The banking sector was fragmented. Commercial banks were highly concentrated and subject to substantial credit risk. They served, very often,

specific regions, particular industries, or even individual large enterprises only, which duplicates to some extent the pattern observed in South Korea (chaebol) and Japan (keiretsu). Such organizational solutions allow for increased efficiency, and facilitate supply of capital along with economic and financial stability of large industrial conglomerates.

The initial period of independence observed a dynamic growth of the private banking sector. The number of registered banks exceeded 200 in the early 1990s (Ayaganov, et al., 2010, p 221). Most of these banks were under-capitalized and therefore unable to satisfy demand for capital. There was another reason for their fast expansion. These small financial intermediaries were very convenient for serving various illegal operations, including the theft of state funds and money laundering. Top managers of large enterprises used their influence on small banks for managing the resources of the company at their own discretion (Ayaganov, et al., 2010, p 22). As can be seen, the initial period was full of poor allocation of savings and misuse of financial intermediaries along with malfunctions of the majority of the commercial bank sector in Kazakhstan. Banks did not perform their role of transforming the nominal, the term and the risk, in the process of providing financing for viable investment projects. Banking supervision was weak, but developing.

The National Bank of Kazakhstan has played the role of a first-level bank from the very beginning of its operations. It has been responsible for the regulation and supervision of domestic banks. When the national currency was introduced in 1993, the domestic banking system was developed well enough to cope with the responsibilities entrusted to it (Rayeva 2001).

The National Bank of Kazakhstan has also experienced changes in its status, regarding its independence, as have most central banks at the end of the 20th century. This was pronounced in 1995, by the Decree of the President of the Republic of Kazakhstan, Nursultan Nazarbayev. Under his decree, the National Bank of the RK has been no longer subordinated to the Cabinet of Ministers. The National Bank of Kazakhstan has become completely independent and accountable only to the President of the RK. In 1993, another reform was conducted. Kazakhstan adopted a program of reforming the banking system. This program removed the obligation of the National Bank of the RK to lend to commercial banks. The commercial banks had to conduct their lending operations on the basis of deposits they

welcomed from the general public. This was a major step towards mobilizing and promoting domestic savings for the financing needs of the national economy. The final step in creating a modern banking sector in Kazakhstan may be tracked back to 1996. It was the decisionto implement International Financial Reporting Standards for their accounting and reporting (National Bank of Kazakhstan, 2001, p. 173). The legal and institutional framework in Kazakhstan has been attractive for foreign banks. Many of them have opened subsidiaries and affiliates to serve the industry and the general public.

The country's transition into a market economy, however, required creation of capital markets with efficient legal and institutional frameworks along with modern technical infrastructure. The main factor for the formation of a stock market in Kazakhstan was mass privatization (Shynybekov D., 2006, p 38) and commercialization of state-owned enterprises. On the 23rd of December 1995, the Law of the Republic of Kazakhstan "On denationalization and privatization" was introduced (Official Journal of the Parliament of the RK, 1995, No. 24, Position 163). This event marked the beginning of the transformation of state property into private property. A massive privatization began. This process is always associated with a substantial increase in demand for capital, and Kazakhstan was not an exception. Due to domestic savings scarcity and low credibility among international investors, the government facilitated the initial stage of privatization. Special privatization funds were created to implement the privatization program. Privatization coupons were distributed through these funds to citizens of Kazakhstan. As the result of this nation-wide general privatization, the society became a shareholder of the newly established joint stock companies (Ayaganov, et al., 2010, p. 208). It was already at that period when the first inflow of foreign capital happened. However, there was no institutional framework for facilitating the transfer of ownership. A national stock exchange was established much later.

The development of Kazakhstan after 1991 is characterized by large-scale and fundamental changes of socio-economic system. Achievements cover, among others, a legal framework, privatized economy, and a vibrant and expanding private sector. Despite these achievements, there are still problems with the stability of the financial sector, especially when one considers the stability and liquidity of the banking system. Due to well-balanced policies and direct government support, Kazakhstan has survived a series of crises and has been able to recover relatively quickly from the 2008-financial crisis.

Modern Economic History of Oman in Brief

It was only in 1967 that oil was exported from Oman for the first time. Before that day, Oman was a local player, famous for shipbuilding, fisheries, and pirating (with headquarters on Zanzibar), as the main economic activities. However, the systematic development of oil production and the resulting growth in the national wealth transformed Oman from a very poor country to another fairy tale land of 1001 nights.

In the 1970s there was a Palace Revolution facilitated byGreat Britain, in which a new leader – Sultan Qaboos, took over the responsibility for Oman. The new Sultan modernized the whole country. Historians evaluate positively all the reforms, calling this initial period "*the Omani Renaissance*" (Kaplan 2011). In 1971 Oman joined the Arab league. In the same year the Sultanate also became a member of the United Nations.

From the beginning of this new era in the history of the Sultanate of Oman, its oil revenue has been consistently invested in improving standards of living. Most of the centrally decided spending has been focused on domestic infrastructure. However, hydrocarbons are not the only wealth-generating factor. This country is also poised to take advantage of its strategic trade location on the Indian Ocean and the Persian Gulf. The role in the global supply chains is undeniable.

Due to political factors, Oman did not become a member of OPEC. It is also outside the local association of oil producers. This creates a special setting in which Oman is relatively neutral in the Persian Gulf region, obtaining all benefits, but suffering no penalties for its neutrality. Concerning the regional integration initiatives, Oman was one of six founding members of the Gulf Cooperation Council that was established already in 1981. However, only the most recent period witnessed intensified attempts to promote economic, political, and security cooperation among its members. Historically, the Sultanate of Oman has always been closely associated with Great Britain, remaining under its protectorate, and the United States also has very good relations with this Arab country.

It was in the year 2000 that Oman became a member of the World Trade Organization, and started to liberalize its domestic markets, including the stock exchange – the Muscat Securities Market. The domestic market for financial instruments was established in the late

1980s. The legal basis was the Royal Decree (53/88), issued on 21 June 1988 to regulate and control the Omani securities market. The economic situation and the nature of the domestic economy back then did not demand capital for business projects to be supplied via a stock market. Therefore, the development of the stock market was slow until financial liberalization at the eve of the new millennium. After ten years of continuous, but slow, growth there was a need for a better functioning of the Market.

The stock exchange in Muscat is a governmental entity, financially and administratively independent from the regulatory body, but it is at the same time subject to its direct supervision. There is no doubt that the manner of organizing the institutional framework allows it to enhance investors' confidence. The MSM has developed its regulations to provide information and financial data relating to the performance of the market itself and of all listed companies. This is achieved by a modern electronic trading system, in line with global standards. Such a technical setup is easy to understand for all foreign investors. It ensures transparency of transactions and activities. This is considered to be one of the main requirements for a modern capital market. Without doubt, it allows investors to make the right investment decision at the right moment. The existing modern mechanism of clearance and settlement encourages the flow of foreign investment to the domestic economy that is being e studied here.

It was only in 1992 that the stock market index was established. Its name is MSM30. This main measure of the performance of the Muscat Stock Market will be used in our empirical investigation. Since July 1, 2009 MSM30 is being calculated on a free-float market capitalization methodology. A 10% capping (CAP) is set to ensure wider representation of smaller companies in the index. The main objective of MSM 30 is to reflect, objectively and fairly, the prices movement of the listed shares in the Market.

The Model

We start with two simple linear regression models for describing stock market performance (SMP) in the Sultanate of Oman (Model 1) and the Republic of Kazakhstan (Model 2) as the endogenous variable. Net international capital flows (ICF) are the exogenous, explanatory variable. There are a variety of options to capture the national stock market performance in the literature (Edwards, Garcia 2008). The most commonly used seems to be restricted to the main stock market index (MSM30 for Oman and KASE Index for Kazakhstan), capitalization

(denominated in the national currencies), and number of companies listed (a simple count), or total trade (denominated in the national currencies). These proxies are sometimes standardized by dividing nominal values by the GDP. However, in our empirical exercise, we start with only nominal variables. Equation 1 defines the general setup for our initial econometric analysis of the proposed relationship between the international capital flows, and the domestic market performance.

$$SMP_t = \alpha + \beta \times ICF_t + \varepsilon_t \qquad (1)$$

Where:

SMP_t – stock market performance in period t,

α – constant,

β – slope of the regression function,

ICF_t – international capital flows in period t,

ε_t – error term.

Starting with a simple graphical presentation of developments of the crucial variables for our regression analysis for both countries, it becomes possible to observe the first common movements in stock market performance and international flows of capital.
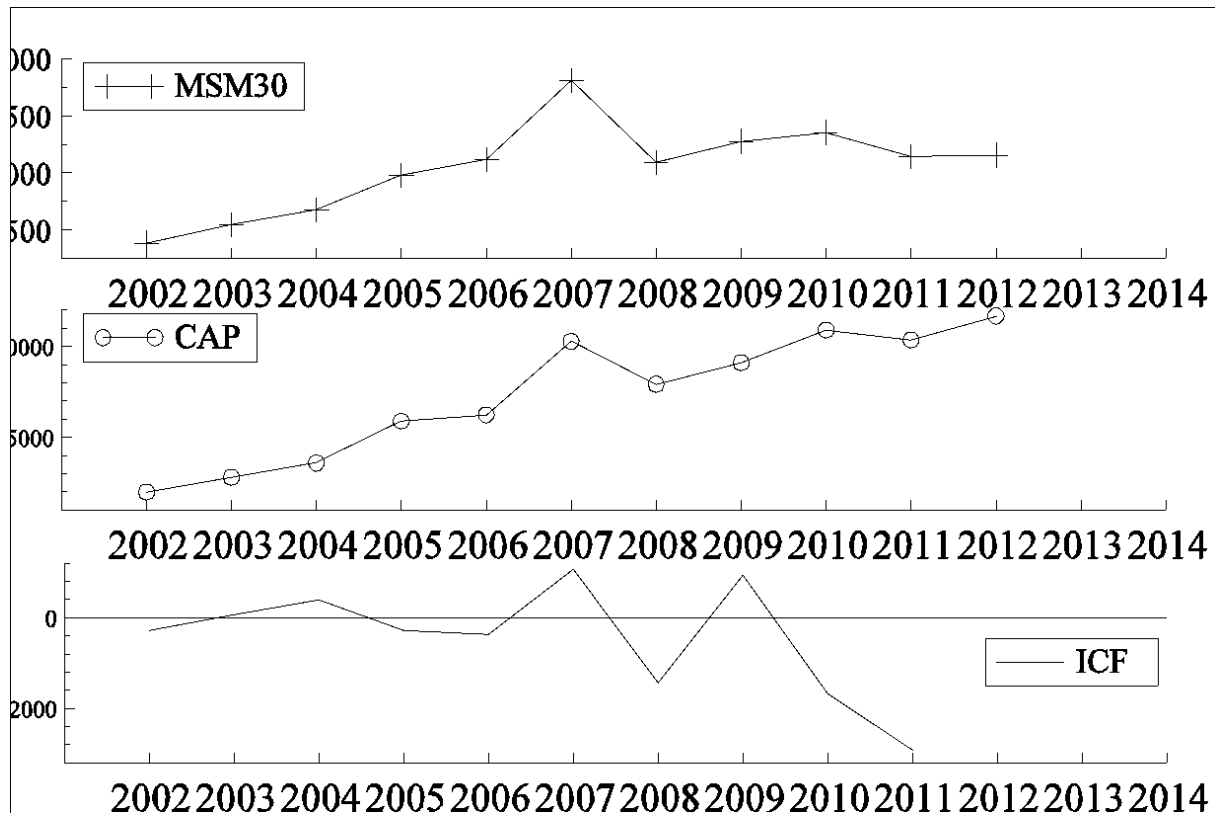
Source: Authors, on the basis of the MSM database, and the Central Bank of Oman Monthly Statistical Bulletin.

Figure 1. Stock market performance measures: MSM30, and market capitalization (CAP) 2002-2012, and Financial Account (ICF) balance 2002-2011 for Oman.

As can be deducted from the graphical presentation (Figure 1), there were only a few episodes when co-movements of variables in question occurred. This, in turn, suggests that in case of the Sultanate of Oman, the international capital flows may play a minor or negligible role in the developments in the domestic stock market. The situation is different, however, in the case of the Republic of Kazakhstan, as depicted in Figure 2. For this country, a different category is used as a proxy of international capital flows. Net Private Capital Flows, from the World Development Indicators database by the World Bank, are a much more meaningful variable that describes net flow of savings.
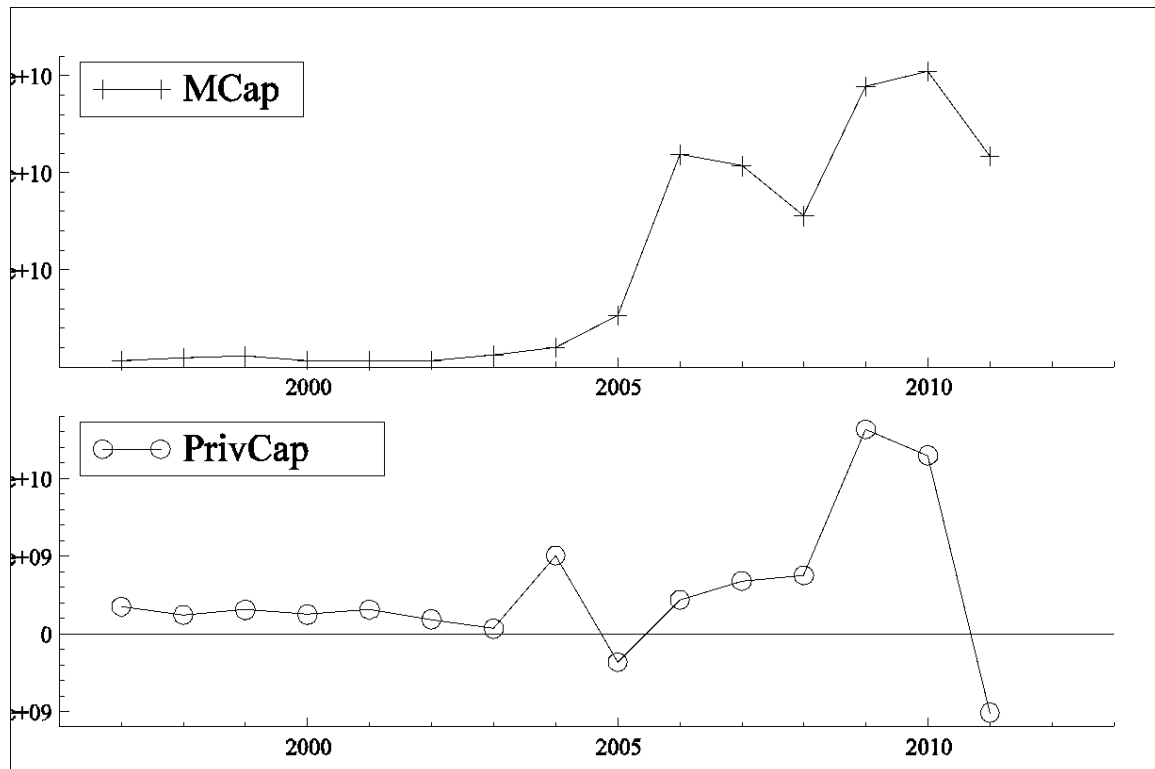
Source: Authors, on the basis of the KASE database, and the World Development Indicators database by the World Bank, Washington D.C. 2013.

Figure 2. Performance measures: KASE capitalization (MCap) 1997-2011, and private capital flows (PrivCap) 2000-2010 for Kazakhstan.

In Kazakhstan, the KASE performance, measured by the market capitalization, seems to mimic the private capital flows. Therefore, international investors may have a significant role in shaping the situation at the local stock market. A more detailed analysis, based on a simple linear regression exercise provides deeper understanding of the observed relationship.

**Empirical Analysis Results and Discussion**

In the first step, normalization of nominal variables was conducted. This transformation was justified by relatively high denominations of the nominal variables. Without scaling the original data, processing it was difficult and the precision of the estimation results was endangered. Normality test and descriptive statistics for all the variables are presented in the Appendix. Some of the original variables for both countries exhibited instability of their means and variances. This, in turn, required de-trending of the original time series, in order to use them in regression models. Results of the unit-root test (ADF test) for all the variables after de-trending are reported in table 1.

Table 1. Unit-root test results for detrended time series of international capital flows and stock performance for Oman and Kazakhstan.

Oman	ADF test value	Critical values
Stock market performance	-3.2667**	1%=-2.968
Financial Account Balance	-3.5782**	1%=-2.968
Kazakhstan	**ADF test value**	**Critical values**
Stock market performance	-3.3385**	1%=-2.776
Private Capital Flows (net)	-2.7188*	5%=-1.97

Source: Authors, using PCGive econometric software.

Correlation coefficients between the endogenous and exogenous variables were different, for Oman: **0.27114**, and for Kazakhstan: **0.52784**. This was the first indication of the fact that we are going to observe different behavior in these two cases. The following regression analysis cast proxies of international capital flows against performance of domestic stock markets. For the Sultanate of Oman a different set was chosen due to data availability, and a different time period was used for final estimating regression parameters (2004-2011) in comparison with the Republic of Kazakhstan (1999-2011).
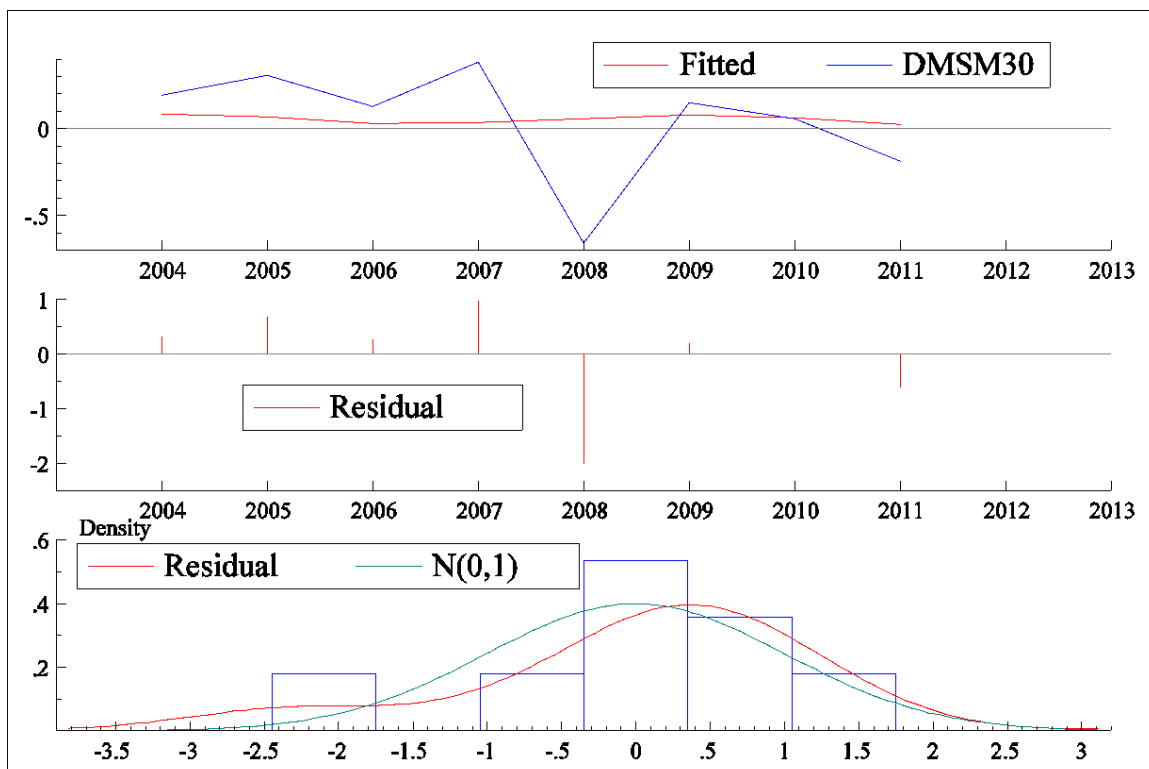
Source: Authors, using PCGive econometric software.

Figure 3. Graphical analysis of the regression model for Oman.

It was only in 2008 that a significant negative residual occurred. The model predicted no deterioration, on the basis of international capital flows. This kind of behavior indicates that the performance of the domestic stock market in Oman is driven mostly by local investors' decisions, and not by international ones. This in turn allows for a conclusion that Oman has not been considered a safe marina for capital in turbulent times. No significant capital flows occurred prior to 2008 or after the outbreak of the global crisis, despite the deterioration of the domestic stock market. Investors were discouraged by the general investment climate, but closing positions has not resulted in net capital outflow. On the one hand, capital invested at the Muscat Stock Market is mostly of Omani origin. On the other hand, despite the liberalization of the BOP accounts, there are no international investors interested in financial instruments traded at the MSM. There may be no problem with domestic savings for real investment projects and therefore no problem of scarcity of capital necessary for further growth and development.

Table 2 presents results of the regression analysis of both stock markets response to international capital flows. Despite the fact that the general formulation of the relationship includes a constant (α), data mining revealed that in both cases fitness of the model is better, with imposed restriction $\alpha=0$.

**Table 2. Regression results for MSM and KASE.**

Country	β	t-Statistic	R^2	DW
Oman	0.043212	1.058	0.12	2.37
Kazakhstan	0.27063	2.781	0.56	1.81

Source: Authors, using PCGive econometric software.

From the regression analysis of the postulated relationship between international capital flows and domestic market performance one can conclude that in case of the Sultanate of Oman, there is no statistically significant foreign driving factor. Not only was the estimated coefficient positive, but close to ZERO. Its t-Statistic indicates that this parameter is not statistically

significant. The model was able to explain only 12% of the total variability of the stock market index with the variability of the Financial Account balance of the BOP.

The case of Kazakhstan is very different from that of the Sultanate of Oman. The underlying economy is much bigger and the demographic potential is much larger. In the same time, it is only a short period for the actual market economy that allowed for accumulation of capital from domestic sources. Therefore, Kazakhstan is supposed to be more dependent on foreign savings not only due to higher demand for capital for heavy industries, but also because of a weaker domestic base for generating savings. As can be seen in the graphical analysis of the regression run for this Central Asian country, the model is quite efficient in describing the KASE performance using the private capital flows to and from Kazakhstan.
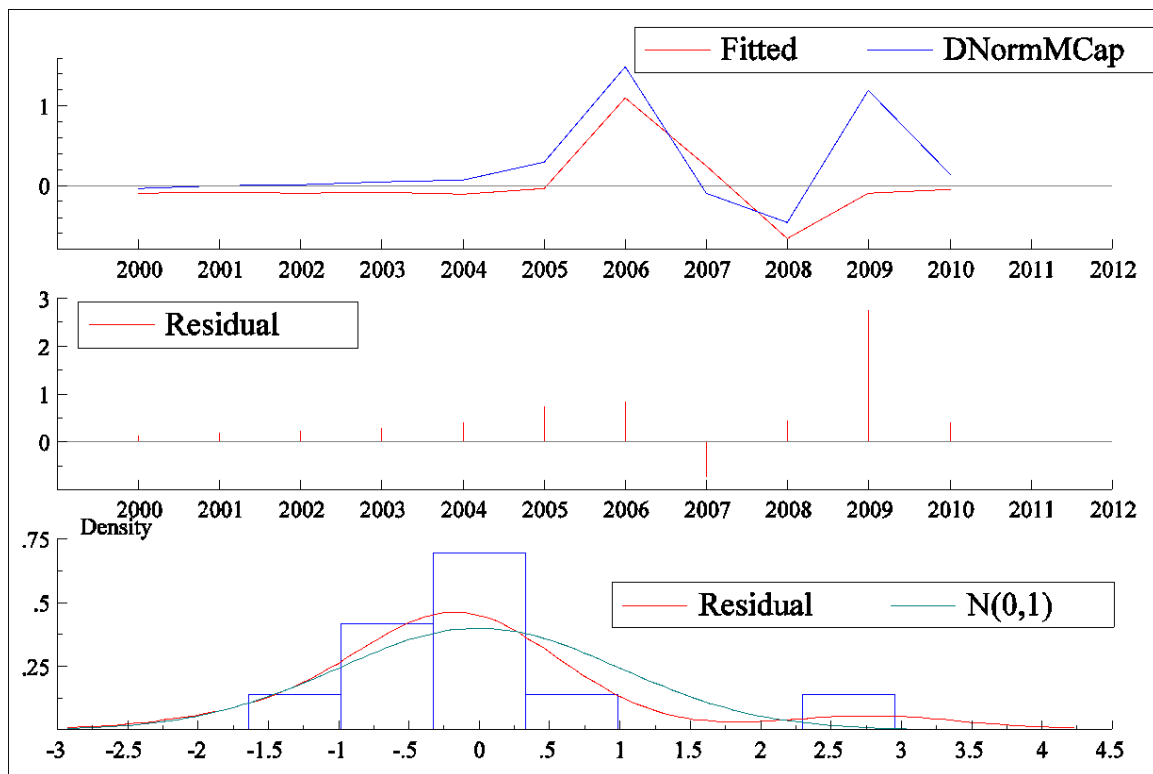
Source: Authors, using PCGive econometric software.

Figure 4. Graphical analysis of the regression model for Kazakhstan.

For the Republic of Kazakhstan, the estimation results indicate significant and positive relationship between the international capital flows and stock market performance. It is possible to explain almost 60% of total variability in market capitalization with variability of the private capital flows to and from Kazakhstan. Estimated parameters are significantly different from ZERO, and are statistically significant.

Conclusions

The aim of this empirical study was to analyze the statistical relationship between international capital flows and stock market performance in two developing countries. This topic is well elaborated in the literature on emerging economies due to several economic policy reasons. Stiglitz (2002) suggests that the financial liberalization observed since the end of 1980s has been detrimental for sustainable growth of low-income countries. He claims that globalization brings instability to small open economies that are sensitive to international capital flows. Following this insight, a simple linear regression exercise has been conducted, with a focus on the Sultanate of Oman and the Republic of Kazakhstan. There are some similarities between

these two economies, mainly in the pattern of the main sources of income and foreign trade pattern. Hydrocarbons are the main commodity exported from these countries. Both of them have a stock market with relatively short history, and an exchange rate regime that may offer significant protection for all foreign investors willing to take long positions in financial assets in these countries. For international investors these two investment opportunities should be more or less similar. Therefore, one could expect that the response of stock markets in both countries is also similar. We posed this hypothesis and we tested it formally by estimating coefficients for international capital flows in a regression with stock market performance as the endogenous variable.

It was found that these two countries operate stock exchanges that respond to net capital flows in a very different manner. Despite the fact that both are small open economies, and fully included in the global financial system, the Sultanate of Oman seems to be a bit underestimated by foreign portfolio investors. The Republic of Kazakhstan stock market is a different playground that is visited by global portfolio capital much more often. And the KASE responds strongly to any changes in net capital flows. This results in higher volatility of prices at this Central Asian stock market.

There is no simple answer to a question of which of these two stock markets is a more attractive place for investing. The fact that international capital flows avoid Oman may be a result of relatively shallow stock market in this country. Therefore, it would be relatively easy to destabilize this Middle-East stock exchange. A continuous inflow of foreign portfolio investments would result in systematic financial asset inflation, and sudden stops or reversals would cause an inverse effect. Another observation could be that with a higher relative level of domestic savings, there is no gap between demand and supply of capital to be closed by importing foreign savings. This, however, is not the case for Kazakhstan.

The stock market in the Republic of Kazakhstan responds strongly to net flows of capital, which is not an unusual situation for an emerging economy. The de facto fixed exchange rate regime, along with high credibility of this commitment, encourages foreign portfolio investors by significantly reducing exchange rate risk. Despite the fact that it has one of the highest growth rates of the GDP in the world, Kazakhstan still suffers from the lack of domestic savings, and capital is scarce. This specific country has a much shorter history of

capital accumulation than Oman, and specific socio-economic conditions that justify low propensity to save, and invest domestically. There have been several serious financial crimes in recent years in Kazakhstan that undermined the credibility of financial intermediaries. Mobilization of domestic savings is therefore challenging. As a result, the national economy imports foreign capital to develop the oil and gas sector along with other heavy industries and agriculture. Capital flows in and out and has some direct and destructive influence on the Kazakhstan Stock Exchange, as observed on the basis of estimated coefficients of the simple regression model. For domestic investors, it becomes important to observe the BOP situation to recognize properly the factors standing behind the observed developments at the national stock market. Residuals in our model for KASE are proxies of the "local content" in its performance. To provide a clear example one could focus on the residual in 2009, when the bullish market was a result of decisions and actions of domestic investors, rather than the foreign ones.

This paper contributes to the methods of empirical analysis of stock market performance. Our proposition is that residuals in a simple regression model (1) are proxies of the local content, when stock market performance is regressed against net foreign capital flows.

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Statistical Appendix

Model for the Republic of Kazakhstan variables:

1. Market Capitalization – MCap, later normalized to NormMCap.

2. Private Capital Flows (net) – PrivCap, later normalized to NormPrivCap

Normality test for NormMCap

Sample size 15: 1997 to 2011

Mean   0.000000

Std.Devn.   1.000000

Skewness   0.624731

Excess Kurtosis   -1.288177

Minimum   -0.854975

Maximum   1.814872

Normality Chi^2(2)=   10.069 [0.0065] **

(asymptotic form of normality test: 2.0128)

Normality test for NormPrivCap

Sample size 15: 1997 to 2011

Mean   0.000000

Std.Devn.   1.000000

Skewness   0.958831

Excess Kurtosis   0.888993

Minimum   -1.768159

Maximum   2.370033

Normality Chi^2(2)=   3.9405 [0.1394]

(asymptotic form of normality test: 2.7923)

The present sample is: 1997 to 2011

Descriptive statistics

Means

  NormMCap NormPrivCap

 6.6613e-017 9.2519e-018

Standard Deviations

  NormMCap NormPrivCap

   1.0351   1.0351

Correlation matrix

	NormMCap	NormPrivCap
NormMCap	1.0000	
NormPrivCap	**0.52784**	1.0000

Unit-root tests 1998 to 2011

Critical values: 5%=-1.968 1%=-2.757

	t-adf	beta Y_1	\sigma	lag
NormMCap	-0.99148	0.84791	0.57259	0
NormPrivCap	-2.7664**	0.14637	1.0633	0

Unit-root tests 1999 to 2011 – after de-trending both variables by calculating first differences (lag = 1) and presenting first differences as a percentage rate of change.

Critical values: 5%=-1.97 1%=-2.776

	t-adf	beta Y_1	\sigma	lag
DNormMCap	-3.3385**	-0.034680	0.61774	0
DNormPrivCa	-2.7188*	-0.23424	1.3793	0

Model for the Sultanate of Oman variables:

1. MSM30 market index – MSM30, transformed into percentage rate of change to deal with non-stationary behavior.

2. Financial Account balance of the Balance of Payments –

Normality test for DMSM30

Sample size 9: 2003 to 2011

Mean   0.073459

Std.Devn.   0.303404

Skewness   -1.422026

Excess Kurtosis   1.060607

Minimum   -0.660592

Maximum   0.382261

Normality Chi^2(2)=   5.6026 [0.0607]

(asymptotic form of normality test: 3.4551)

Normality test for DICF

Sample size 9: 2003 to 2011

Mean   1.912300

Std.Devn.   1.659014

Skewness   1.585520

Excess Kurtosis   1.764127

Minimum   0.253886

Maximum   6.111111

Normality Chi^2(2)=   6.7257 [0.0346] *

(asymptotic form of normality test: 4.9379)

The present sample is: 2003 to 2011

Descriptive statistics

Means

DMSM30	DICF
0.073459	1.9123

Standard Deviations

DMSM30	DICF
0.32181	1.7597

Correlation matrix

	DMSM30	DICF
DMSM30	1.0000	
DICF	**0.27114**	1.0000

Unit-root tests 2004 to 2011

Critical values: 5%=-1.989 1%=-2.968

	t-adf	beta Y_1	\sigma	lag
DMSM30	-3.2667**	-0.17531	0.33022	0
DICF	-3.5782**	0.34189	1.3947	0

Reanalysis of "Timing Effects of Listing Gratitude toward One's Parent(s) on Subjective Well-Being in Japanese Undergraduate Students"

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Abstract

The data of published paper (Kobayashi, 2017) that had been analyzed by multivariate analysis of variance was reanalyzed by multivariate analysis of covariance. The reanalysis was able to offer clearer results than the original analysis did. The condensed gratitude listing practice seemed effective to increase subjective happiness and affect balance with medium size effects ($0.50 <$ Cohen's ds < 0.80), and the spaced-apart gratitude listing practice seemed effective to increase subjective happiness, affect balance, and life satisfaction with small size effects ($0.20 <$ Cohen's ds < 0.50). All the findings, including statistically nonsignificant findings, were reported for the sake of future meta-analysis.

Keywords: gratitude, Japan, positive psychology, parent

Previously, I tested the effects of gratitude listing toward one's parent(s) with two different timings with the same amount of practice regarding subjective well-being (Kobayashi, 2017). Seventy-five participants were randomly assigned to three different groups. Those who were in Group A ($n = 25$) listed their gratitude toward their parents every day for six days for a total of six times. Those who were in Group B ($n = 25$) listed their gratitude toward their parents once a week for five weeks for a total of six times. Those who were in Group C ($n = 25$) did nothing. All participants answered three measurements (i.e., subjective happiness, positive and negative affect, and life satisfaction) three times: Time 1 (pre-test), Time 2 (seven days later) and Time 3 (36 days later). I analyzed the data by a 3 (between subjects: treatment group) X 3 (within subjects: time of assessment) multivariate analysis of variance with three dependent variables: subjective happiness, affect balance, and life satisfaction, following univariate tests for each variable, and post-hoc tests with a Bonferroni adjustment. I interpreted the results with p values, effect sizes and confidence intervals (CIs), instead of relying solely on p values. Nevertheless, the results were still quite unclear from the analysis.

Several scholars in different disciplines, such as medicine (Van Breukelen, 2006; Vickers & Altman, 2001) and dentistry (Lehnhoff & Grainger, 1974; Tu, Blance, Clerehugh, & Gilthorpe, 2005) recommended using analysis of covariance (ANCOVA) with a pre-test as a covariate instead of repeated measures analysis of variance (RM-ANOVA) when a researcher analyzes the data from a randomized study. There are at least two major advantages of ANCOVA over RM-ANOVA. In general, an ANCOVA offers (a) more accurate estimation of true effect size because it deals with regression to the mean and (b) more statistical power than RM-ANOVA does. Therefore, I reanalyzed the data with a 3 (between subjects: treatment group) X 2 (within subjects: time of assessment) multivariate analysis of covariance of three dependent variables with their pre-test scores as the covariates, following univariate tests for each variable, and post-hoc tests with a Bonferroni adjustment. The results were interpreted by considering effect sizes and confidence intervals (Cumming, 2012, 2014). Regarding visual interpretations of the relationships between two independent means or between two related means with their confidence intervals in the figures, I referred to the guidelines of the New Statistics (See Cumming, 2012, pp. 153-179 & 2014, pp. 18-20) and ignored the p values. The "overlap rule for two independent means"

(Cumming, 2012, p. 158) applies only to the comparison between confidence intervals of the different groups in the same time phase in Figures 1 through 3. When I calculated the effect sizes, I followed the guidelines of the New Statistics (See Cumming, 2012, pp. 281-298). When I interpreted the size of Cohen's d, I used 0.20 as small, 0.50 as medium, and 0.80 as large, for the criterion score of each category (Cohen, 1992).

As in Kobayashi (2017), the goal of this re-analysis is to show how the subjective well-being of participants in each group changes instead of conducting some hypotheses tests.

Due to the nature of reanalysis, I did not include the backgrounds, participants, materials, nor procedure of the original study in this paper. These were described in the original paper (Kobayashi, 2017).

Results

A 3 (between subjects: treatment group) X 2 (within subjects: time of assessment) multivariate analysis of covariance (MANCOVA) was conducted on the three dependent variables (i.e., subjective happiness, affect balance, and life satisfaction) with their pre-test scores as the covariates.

Before conducting the MANCOVA, the following assumptions were assessed, (a) correlation between the covariates and the dependent variables, (b) normal distribution of the dependent variables across the independent variable groups, (c) homogeneity of variances across the independent variable groups, (d) homogeneity of regression slopes across the independent variable groups, (e) reliability of each covariate, and (f) independence of the covariate across the independent variable groups. Although the assumptions of homogeneity of variance regarding subjective happiness and life satisfaction were violated, such violations were ignored because each group had the same number of participants (see Field, 2013, p. 194). All other assumptions were met in all dependent variables.

The MANCOVA results revealed significant multivariate effects across the interaction between group and time, $V = .21$, $F(6, 136) = 2.60$, $p = .020$, $\eta_p^2 = .10$. However, no significant multivariate effects were found on time, $V = .11$, $F(3, 67) = 2.73$, $p = .051$, $\eta_p^2 = .11$ and group, $V = .11$, $F(6, 136) = 1.30$, $p = .261$, $\eta_p^2 = .05$. Subsequently, a 3 (between subjects: treatment group) X 2 (within subjects: time of assessment) analysis of covariance (ANCOVA) was conducted on each dependent variable with each pre-test score as the covariate.

The results of ANCOVA on subjective happiness indicated significant effects on time, $F(1, 69) = 6.19$, $p = .015$, $\eta_p^2 = .08$ and group, $F(2, 69) = 3.71$, $p = .029$, $\eta_p^2 = .10$. However, no significant effect was found on the interaction between group and time, $F(2, 69) = .48$, $p = .621$, $\eta_p^2 = .01$.

Regarding subjective happiness, all the results of post-hoc tests with a Bonferroni adjustment were reported in Table 2. As you can see in Table 2 and Figure 1, Group A became higher than both Group B (mean difference = 1.29, 95% CI [-0.12, 2.70], Cohen's d = 0.63) and Group C (mean difference = 1.56, 95% CI [0.13, 2.98], Cohen's d = 0.76) at Time 2 with medium size effects, and Group B (mean difference = 0.62, 95% CI [-0.32, 1.56], Cohen's d = 0.26) increased the score from Time 2 to Time 3 with a small size effect, and the effect of Group A continued until Time 3 (mean difference = 0.07, 95% CI [-0.86, 1.00], Cohen's d = 0.03).

The results of ANCOVA on affect balance indicated significant effects on the interaction between group and time, $F(2, 69) = 5.98$, $p = .004$, $\eta_p^2 = .15$. However, no significant effect was found on time, $F(1, 69) = 1.74$, $p = .191$, $\eta_p^2 = .03$ and group, $F(2, 69) = 0.86$, $p = .427$, $\eta_p^2 = .02$.

Regarding affect balance, all the results of post-hoc tests with a Bonferroni adjustment were reported in Table 3. As you see in Table 3 and Figure 2, Group A became higher than both Group B (mean difference = 5.51, 95% CI [-0.41, 11.43], Cohen's d = 0.64) and Group C (mean difference = 4.66, 95% CI [-1.31, 10.63], Cohen's d = 0.54) at Time 2 with medium size effects, and Group B (mean difference = 4.50, 95% CI [0.23, 8.77], Cohen's d = 0.46) increased the score from Time 2 to Time 3 with a small size effect, and the effect of Group A disappeared at Time 3 (mean difference = -5.77, 95% CI [-10.00, -1.54], Cohen's d = -0.59).

The results of ANCOVA on life satisfaction indicated no significant effects on the interaction between group and time, $F(2, 69) = 2.77$, $p = .07$, $\eta_p^2 = .07$, and time, $F(1, 69) = 0.31$, $p = .577$, $\eta_p^2 = .01$, and group, $F(2, 69) = 0.38$, $p = .689$, $\eta_p^2 = .01$.

Regarding life satisfaction, all the results of post-hoc tests with a Bonferroni adjustment were reported in Table 4. As you see in Table 4 and Figure 3, only Group B (mean difference = 1.27, 95% CI [-0.12, 2.66], Cohen's d = 0.34) increased the score from Time 2 to Time 3 with a small size effect.

Discussion

First, regarding subjective happiness, Group A became higher than both Group B and Group C at Time 2 with medium size effects, and Group B increased the score from Time 2 to Time 3 with a small size effect, and the effect of Group A continued until Time 3. Such findings indicated that the condensed gratitude listing practice seemed effective to increase one's subjective happiness and this effect continued for four weeks. Indeed, these findings have already been demonstrated by previous studies (Gander, Proyer, Ruch, & Wyss, 2013; Seligman, Steen, Park, & Peterson, 2005). The increase from Time 2 to Time 3 of those who conducted the spaced-apart gratitude listing practice was small.

Second, regarding affect balance, Group A became higher than both Group B and Group C at Time 2 with medium size effects, and Group B increased the score from Time 2 to Time 3 with a small size effect, and the effect of Group A disappeared at Time 3. Such findings indicated that the condensed gratitude listing practice seemed effective to increase one's affect balance and this effect did not continue for four weeks after the termination of such a gratitude practice. The increase from Time 2 to Time 3 of those who conducted the spaced-apart gratitude listing practice was small.

Third, affect balance of Group A decreased from Time 2 to Time 3 with a medium size effect. Additionally, affect balance of Group C seemed to decrease from Time 1 to Time 3. As I mentioned in the original study (Kobayashi, 2017), such results might be influenced by the particular semester schedule in which the study was held. At the beginning of the semester, there is not much school work and most of the participants started their assignments at that time. However, the amount of school work increased as the semester went by and it might have had a negative influence on their affect balance.

Fourth, regarding life satisfaction, only Group B increased the score from Time 2 to Time 3 with a small size effect. Such findings indicated that it may be effective to conduct the spaced-apart gratitude listing practice to increase one's life satisfaction somewhat.

In summary, the condensed gratitude listing practice seemed effective to increase one's subjective happiness and affect balance with medium size effects ($0.50 <$ Cohen's ds < 0.80), and the spaced-apart gratitude listing practice seemed effective to increase one's subjective happiness, affect balance, and life satisfaction with small size effects ($0.20 <$ Cohen's ds < 0.50).

I assume such findings are interesting because previous research (Lyubomirsky, Sheldon, & Schkade, 2005) and an authority (Emmons, 2013) suggested more effectiveness of the spaced-apart gratitude listing practice than the condensed gratitude listing practice. As

I mentioned in the original study (Kobayashi, 2017), it is still unclear to me why the condensed gratitude listing practice seemed ineffective to increase one's life satisfaction although it was effective to increase one's subjective happiness and affect balance. In addition, the effect of the condensed gratitude listing practice lasted for four more weeks after the termination of the practice in terms of subjective happiness but not affect balance. This is logical because subjective happiness is an evaluation of one's state and affect balance is based on one's feelings. Feelings fluctuate heavily more than cognitive appraisals.

As I mentioned in the original study (Kobayashi, 2017), there are several shortcomings in this study. First of all, it is based on a small, convenience sample from a particular institution. Second, the self-serving bias could exist in the results because the research relied on self-reports of the participants. Third, the participants of the study might be qualitatively different from a general population in Japan because they study almost all of their courses that are conducted in English in their school life.

Although this study has various shortcomings, I am relieved to report clearer results than the original study did. I believe more studies are necessary to investigate gratitude intervention issues. For the sake of future meta-analysis, all the findings, including nonsignificant results, are reported.

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Table 1.

Means, Standard Errors, and 95% Confidence Intervals by Condition and Time of Assessment

			Time of Assessment			
DV	Condition	*n*	Time 2 (*SE*)	95% CI	Time 3 (*SE*)	95% CI
Subjective Happiness	Group A	25	20.04 (0.41)	[19.23, 20.85]	20.11 (0.53)	[19.05, 21.18]
	Group B	25	18.75 (0.41)	[17.93, 19.57]	19.37 (0.54)	[18.30, 20.44]
	Group C	25	18.49 (0.41)	[17.67, 19.31]	18.52 (0.54)	[17.44, 19.60]
Affect Balance	Group A	25	11.30 (1.70)	[7.90, 14.69]	5.52 (2.18)	[1.19, 9.86]
	Group B	25	5.79 (1.72)	[2.36, 9.22]	10.29 (2.20)	[5.91, 14.67]
	Group C	25	6.63 (1.73)	[3.19, 10.08]	4.47 (2.21)	[0.07, 8.87]
Life Satisfaction	Group A	25	20.28 (0.72)	[18.85, 21.71]	20.38 (0.74)	[18.90, 21.87]
	Group B	25	19.56 (0.72)	[18.12, 21.00]	20.83 (0.75)	[19.33, 22.33]
	Group C	25	20.12 (0.73)	[18.67, 21.57]	19.03 (0.76)	[17.52, 20.54]

Note. SE = standard error, CI = confidence interval, DV = dependent variable.

Table 2.

t values, p values, Mean Differences, 95% Confidence Intervals, and Cohen's d of Subjective Happiness by Pairs and Times of Assessment

Time	Pairs(i-ii)	$t(24)$	p	Mean Difference(i-ii)	95% CI	Cohen's d
2	A-B	2.24	.084	1.29	[-0.12, 2.70]	0.63
2	A-C	2.69	.028	1.56	[0.13, 2.98]	0.76
2	B-C	0.45	1.000	0.26	[-1.18, 1.71]	0.13
2-3	A3-A2	0.15	.880	0.07	[-0.86, 1.00	0.03
2-3	B3-B2	1.31	.194	0.62	[-0.32, 1.56]	0.26
2-3	C3-C2	0.06	.950	0.03	[-0.92, 0.98]	0.01
3	A-B	0.98	.984	0.74	[-1.11, 2.60]	0.28
3	A-C	2.10	.120	1.60	[-0.27, 3.47]	0.59
3	B-C	1.12	.821	0.85	[-1.04, 2.75]	0.32

Note. CI = confidence interval; "A3" means "Group A at Time 3".

Table 3.

t values, p values, Mean Differences, 95% Confidence Intervals, and Cohen's d of Affect Balance by Pairs and Times of Assessment

Time	Pairs(i-ii)	$t(24)$	p	Mean Difference(i-ii)	95% CI	Cohen's d
2	A-B	2.28	.076	5.51	[-0.41, 11.43]	0.64
2	A-C	1.92	.178	4.66	[-1.31, 10.63]	0.54
2	B-C	-0.35	1.000	-0.85	[-6.90, 5.21]	-0.10
2-3	A3-A2	-2.72	.008	-5.77	[-10.00, -1.54]	-0.59
2-3	B3-B2	2.10	.039	4.50	[0.23, 8.77]	0.46
2-3	C3-C2	-1.01	.318	-2.17	[-6.46, 2.13]	-0.22
3	A-B	-1.54	.380	-4.76	[-12.33, 2.80]	-0.44
3	A-C	0.34	1.000	1.05	[-6.58, 8.68]	0.10
3	B-C	1.87	.207	5.82	[-1.91, 13.55]	0.53

Note. CI = confidence interval; "A3" means "Group A at Time 3".

Table 4.

t values, p values, Mean Differences, 95% Confidence Intervals, and Cohen's d of Life Satisfaction by Pairs and Times of Assessment

Time	Pairs(i-ii)	$t(24)$	p	Mean Difference(i-ii)	95% CI	Cohen's d
2	A-B	0.70	1.000	0.72	[-1.78, 3.21]	0.20
2	A-C	0.15	1.000	0.16	[-2.36, 2.67]	0.04
2	B-C	-0.55	1.000	-0.56	[-3.11, 1.99]	-0.15
2-3	A3-A2	0.15	.882	0.10	[-1.28, 1.48]	0.03
2-3	B3-B2	1.82	.074	1.27	[-0.12, 2.66]	0.34
2-3	C3-C2	-1.55	.125	-1.09	[-2.49, 0.31]	-0.29
3	A-B	-0.42	1.000	-0.45	[-3.04, 2.14]	-0.12
3	A-C	1.27	.626	1.35	[-1.26, 3.96]	0.36
3	B-C	1.69	.301	1.80	[-0.85, 4.45]	0.48

Note. CI = confidence interval; "A3" means "Group A at Time 3".

Figure 1. Changes of subjective happiness at three time periods: Time 1 (Pretest), Time 2 (7 days later) and Time 3 (36 days later). Error bars indicate 95% confidence intervals. All scores at Time 1 represent the pretreatment grand mean (19.13) because the pretest score was used as a covariate in analysis of covariance. The overlap rule for two independent means applies only to the comparison between confidence intervals of the different groups in the same time phase.
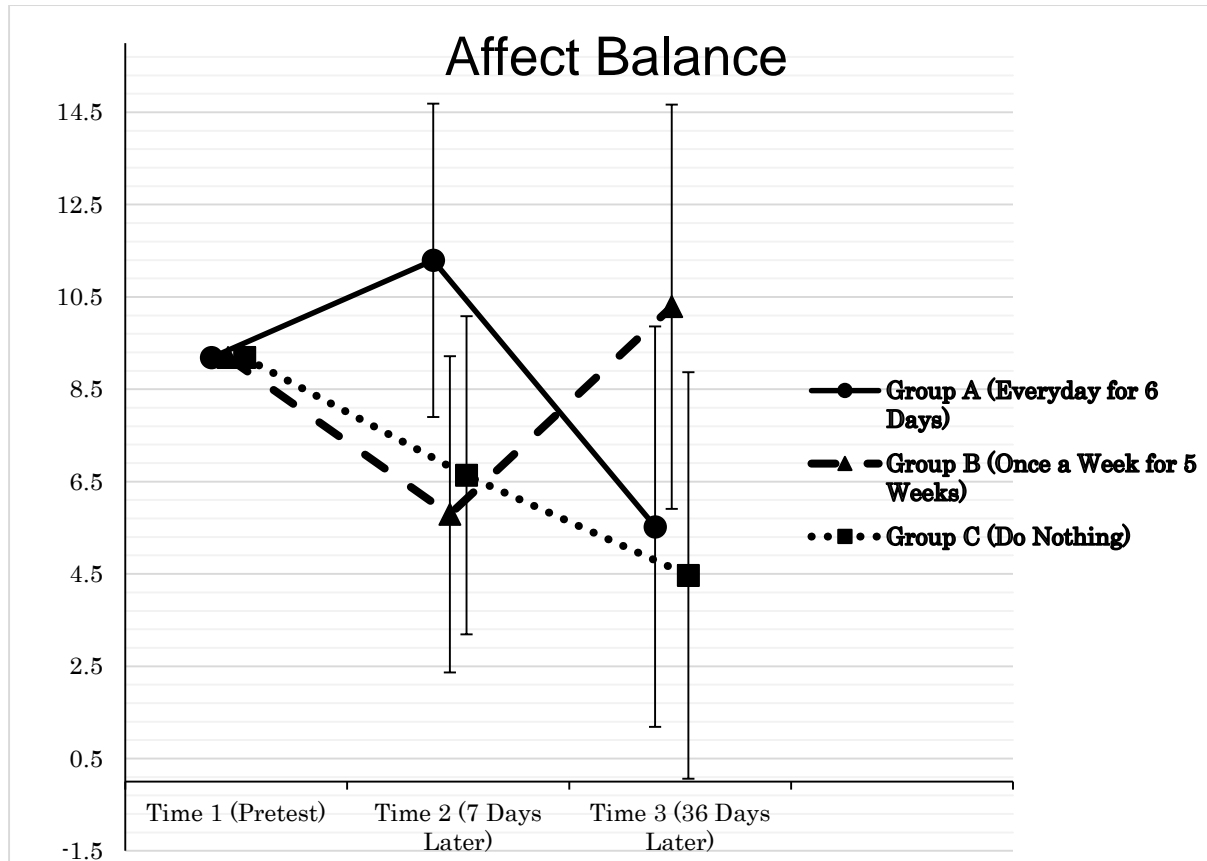
Figure 2. Changes of affect balance at three time periods: Time 1 (Pretest), Time 2 (7 days later) and Time 3 (36 days later). Error bars indicate 95% confidence intervals. All scores at Time 1 represent the pretreatment grand mean (9.19) because the pretest score was used as a covariate in analysis of covariance. The overlap rule for two independent means applies only to the comparison between confidence intervals of the different groups in the same time phase.
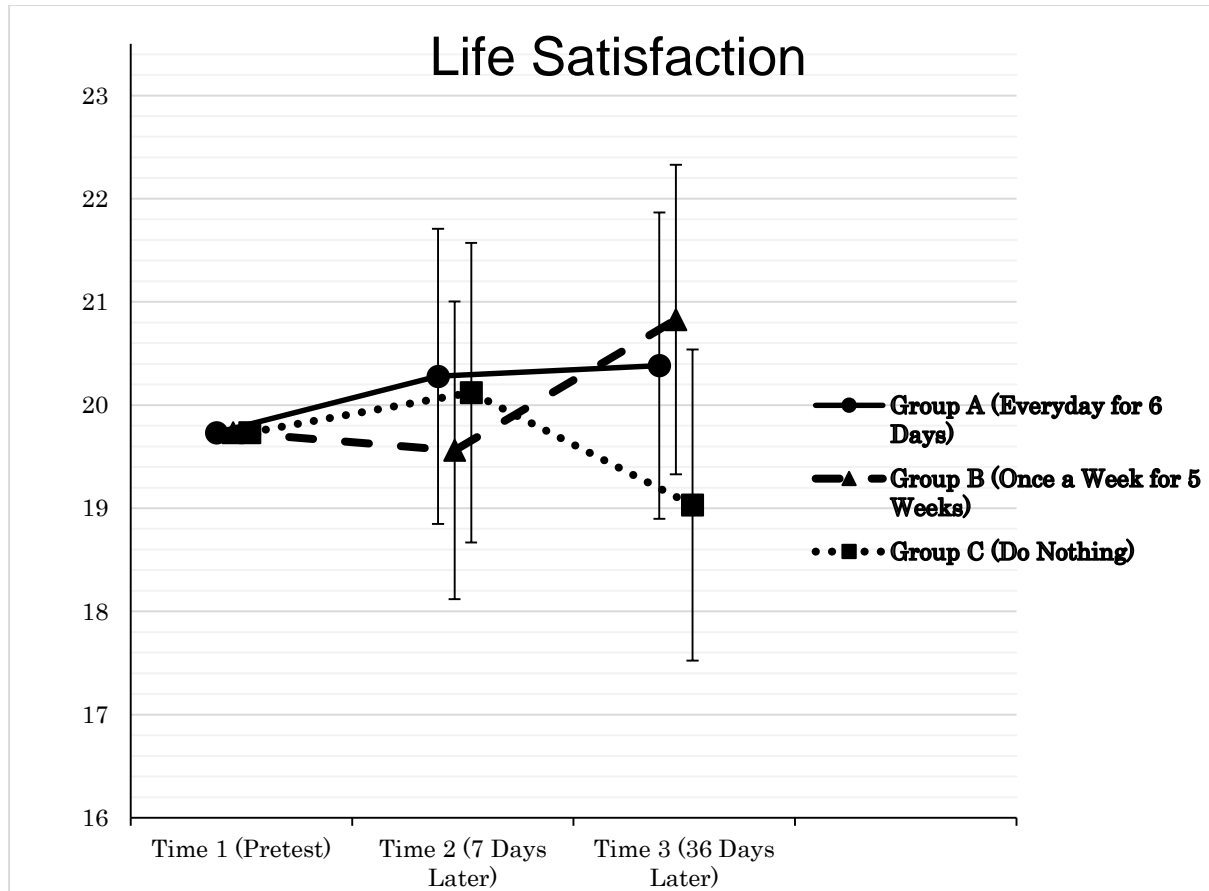
Figure 3. Changes of life satisfaction at three time periods: Time 1 (Pretest), Time 2 (7 days later) and Time 3 (36 days later). Error bars indicate

95% confidence intervals. All scores at Time 1 represent the pretreatment grand mean (19.73) because the pretest score was used as a covariate

in analysis of covariance. The overlap rule for two independent means applies only to the comparison between confidence intervals of the

different groups in the same time phase.