# Comparative Culture

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Editorial Correspondence *Comparative Culture:*

Miyazaki International College

1405 Kano, Kiyotake-cho

Miyazaki-shi, Miyazaki 889-1605 Japan

Email:ahoward@sky.miyazaki-mic.ac.jp

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# 幼稚園教育要領改訂が幼稚園教諭の職務に及ぼす変化について

# [Changes in the Duties of Kindergarten Teachers due to the Revision of Yōchien Kyōiku Yōryō (Guidelines for Kindergarten Education)]

**小林太　KOBAYASHI Futoshi**

**Abstract**
This survey study was conducted with the teachers in two kindergartens located in Miyazaki city regarding the changes and difficulties they faced due to the 2018 revision of Yōchien Kyōiku Yōryō [Guidelines for Kindergarten Education] / Yōhorenkeigata Nintei Kodomoen Kyōiku Hoiku Yōryō [Guidelines for Authorized Early Childhood Education and Care Center]. The qualitative data were analyzed by the KH Corder, and three major changes and difficulties were identified.

Key Words: *Yōchien Kyōiku Yōryō* [Guidelines for Kindergarten Education], Kindergarten, Survey, KH Corder

**謝辞**
本研究に御協力いただきました幼稚園教諭の皆様に厚く御礼申し上げます。

**抄録**
本研究は、2018 年の幼稚園教育要領（幼保連携型認定こども園教育・保育要領）改訂に伴ってもたらされた幼稚園教諭の職務上の変化と苦労に関して、宮崎市に所在する 2 つの幼稚園の教諭にアンケート調査を行ったものである。質的に回答されたデータが KH Corder を用いて分析され、3 つの主要な変化と苦労が浮き上がった。

**キーワード**
幼稚園教育要領，幼稚園，アンケート，KH Corder

　社会が幼少期の子ども達に適切な教育を施すという社会投資は、認知的スキル（例：読み書きや算数）に加えて、非認知的スキル（例：社会的、情動的スキル）も向上させ、それらの効果として生涯賃金上昇という経済的効果だけではなく、高校卒業率上昇といった教育効果や、犯罪率及び 10 代の妊娠率の減少といった社会的効果ももたらす。このような社会投資は誕生から 5 歳までの期間に行われるとその効果が著しい（Heckman, 2013 古草訳）。

　世界的規模では、1990 年代から幼児教育を改革する風潮が見られる。ニュー

ジーランドは 1990 年代半ば、イギリスは 1990 年代後半から幼児教育改革を断行して成果をあげており、アジアにおいても韓国、中国、台湾、シンガポール等が今世紀初頭から幼児教育を改革している(無藤, 2017a)。

そのような世界的潮流の中、我が国においても新しい幼稚園教育要領（幼保連携型認定こども園教育・保育要領）が 2018 年 4 月 1 日から施行された。(以下、要領と記す。) 改訂に伴い、「3 歳児から 5 歳児を対象とした教育機関として機能してきた幼稚園」の多くが「0 歳児から 5 歳児を対象とした教育・保育機関として機能する幼保連携型認定こども園」として再出発を始めている。しかし要領改訂に対して、幼稚園（幼保連携型認定こども園）教諭がどのように対応してきたかについての知見はほぼ皆無であり、その研究が必要とされている。(松原・長田・徳田・河野・深沢・加藤・請川, 2019)。従って、本研究では要領改訂後に幼稚園教諭自身の教育・保育実践で最も変化したこと、及びその変化に適応するために教諭自身が最も苦労したことに関する自由記述を依頼した。得られたデータについての探索分析を行い、仮説作成後に、その仮説の妥当性をコーディング分析して検証した。

## 方法

本研究は宮崎国際大学国際教養学部の研究倫理委員会の審査を受け、国際教養学部学部長による施行認可を受けたものである。宮崎市内の 2 つの幼稚園（幼保連携型認定こども園）の教諭に「研究説明と同意文書」(インフォームドコンセント）が配布された。本論文中では 2 つの幼稚園を便宜的に「A 幼稚園」と「B 幼稚園」と呼称する。文書には、研究の目的と意義、研究の概要、研究参加者の権利、個人情報の取扱い、研究資金に関する情報等の重要事項が明記してあり、同意した教諭のみが署名しアンケート用紙上の 6 項目の質問に対する回答を行った。

アンケートでは(a)性別、(b)年齢層、(c)2018 年度から新要領が施行されたことを知っているか否か、要領改訂後の職務実践での最大の(d)変化と(e)苦労、の 5 点に対する質問を行った。

## 参加者

全参加者($N$ = 27)は女性であり、その年齢層は表 1 に記す。また(c)2018 年度から新要領が施行されたことを知っているか否かという項目については、改定後から勤務を開始した 1 名を除いて全員が知っていると回答した。

表１　全参加者の年齢層

| 年齢層 | A 幼稚園（%） | B 幼稚園（%） | 合計(%) |
|---|---|---|---|
| 20 代 | 6（46.2%） | 4（28.6%） | 10（37.0%） |
| 30 代 | 3（23.1%） | 3（21.4%） | 6（22.2%） |
| 40 代 | 2（15.4%） | 4（28.6%） | 6（22.2%） |
| 50 代 | 2（15.4%） | 3（21.4%） | 5（18.5%） |
| 合計 | 13（100.0%） | 14（100.0%） | 27(100.0%) |

## 結果

### 分析

分析プログラムについて

要領改訂後の職務実践での最大の(d)変化と(e)苦労という項目は KH Corder 2 (樋口, 2014)を用いて分析された。またKH Corder使用時の事前処理として、同等の意味を示す複数の言葉は統一表現にした後、分析を開始した。例えば「10の姿」、「育ってほしい10の姿」、「育てたい10の姿」等は「幼児期の終わりまでに育ってほしい10の姿」に統一表記した。

項目(d)についての探索分析

項目(d)について、全参加者($N$ = 27)中、5名は要領改訂後に勤務を開始しており、7名が変化なしと回答したので、回答された15名の自由記述のテキスト分析を行った。その年齢層は表2に記す。

表2 項目(d)の自由記述者の年齢層

| 年齢層 | A幼稚園 (%) | B幼稚園 (%) | 合計(%) |
|---|---|---|---|
| 20代 | 1 (14.3%) | 1 (12.5%) | 2 (13.3%) |
| 30代 | 3 (42.9%) | 2 (25.0%) | 5 (33.3%) |
| 40代 | 2 (28.6%) | 3 (37.5%) | 5 (33.3%) |
| 50代 | 1 (14.3%) | 2 (25.0%) | 3 (20.0%) |
| 合計 | 7 (100.0%) | 8 (100.0%) | 15(100.0%) |

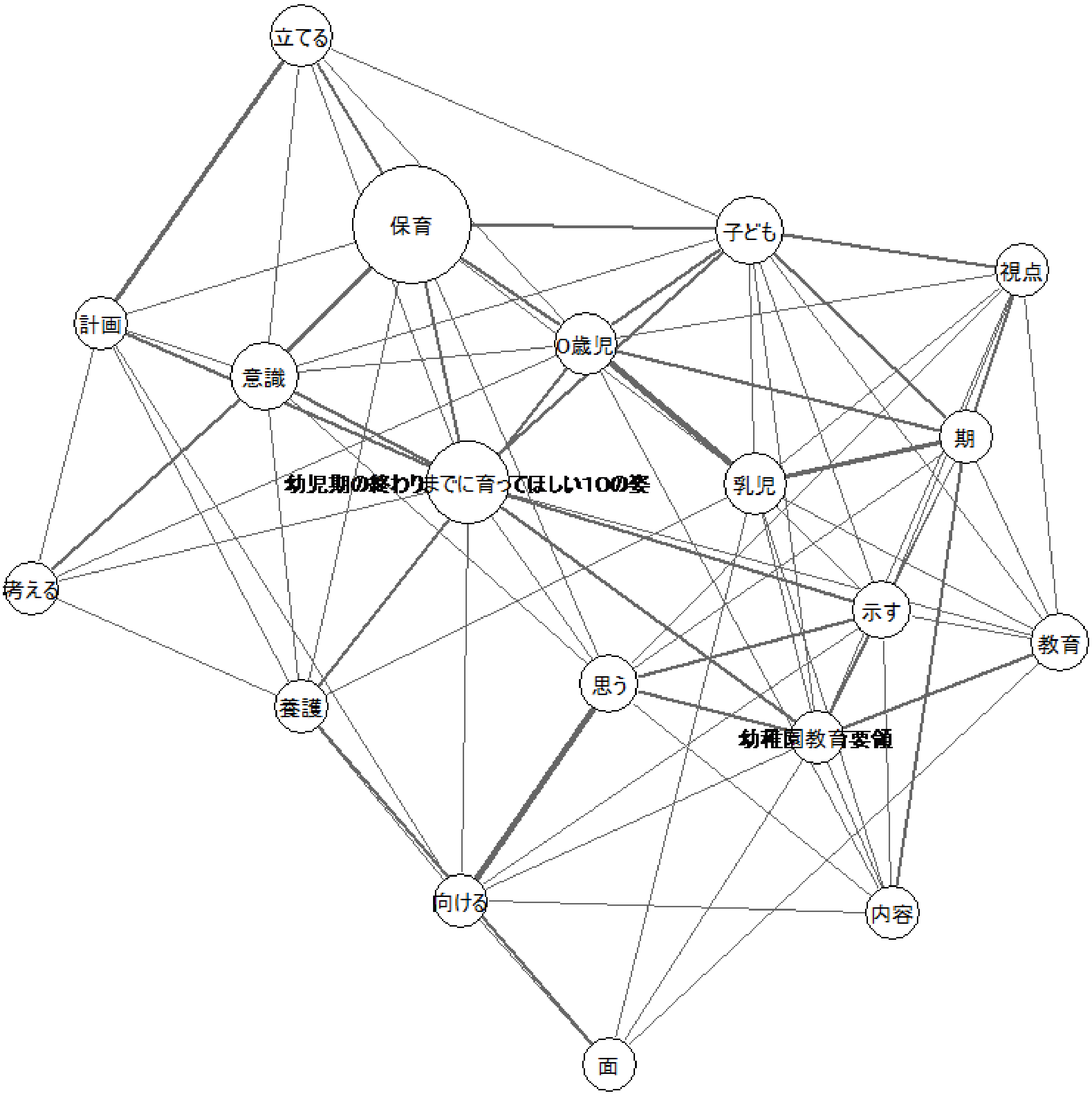
まず項目(d)の頻出語を抽出した。表3は出現回数が2回以上あった33語を示す。

表3 項目(d)の頻出語

| 抽出語 | 出現回数 | 抽出語 | 出現回数 | 抽出語 | 出現回数 |
|---|---|---|---|---|---|
| 保育 | 16 | 計画 | 3 | 見直す | 2 |
| 幼児期の終わりまでに育ってほしい10の姿 | 9 | 向ける | 3 | 考え方 | 2 |
| 意識 | 6 | 考える | 3 | 項目 | 2 |
| 子ども | 6 | 視点 | 3 | 姿 | 2 |
| 0歳児 | 5 | 内容 | 3 | 施行 | 2 |
| 乳児 | 5 | 面 | 3 | 実践 | 2 |
| 立てる | 5 | 幼稚園教育要領 | 3 | 小学校 | 2 |
| 教育 | 4 | 養護 | 3 | 生活 | 2 |
| 思う | 4 | 異なる | 2 | 前 | 2 |
| 示す | 4 | 育つ | 2 | 多い | 2 |
| 期 | 3 | 園児 | 2 | 達 | 2 |

次に共起ネットワークを描き、共に出現する確率の高い語のパターンを調べた。図1は項目(d)の共起ネットワークであり、出現数が3回以上の語のみが描かれている。出現数が多い語ほど大きい円で、また共起関係が強いほど太い線で描画されている。

図1 項目(d)の共起ネットワーク




　続いて、類似する回答をグループ分けするためにクラスター分析を行った。なおKH Corderの標準設定に従い、クラスターの方法はWard法を、距離の定義はJaccard係数を用いた。Jaccard係数は0から1までの値をとり、値が高いほど語の共起性が高くなる。(牛澤, 2018)。

表 4 は出現回数が 2 回以上の語を使用したクラスター分析の結果を示す。
表 4 項目(d)のクラスター分析

| クラスター番号 | 各クラスターに含まれる文書数 | 各クラスターの特徴語 | Jaccard 係数 |
|---|---|---|---|
| 1 | 5 | 保育 | .45 |
| | | 立てる | .43 |
| | | 幼児期の終わりまでに育ってほしい 10 の姿 | .40 |
| | | 意識 | .38 |
| | | 計画 | .33 |
| 2 | 4 | 異なる | .50 |
| | | 幼稚園教育要領 | .40 |
| | | 教育 | .40 |
| | | 示す | .40 |
| | | 幼児期の終わりまでに育ってほしい 10 の姿 | .30 |
| 3 | 6 | 0 歳児 | .67 |
| | | 保育 | .55 |
| | | 子ども | .50 |
| | | 養護 | .50 |
| | | 乳児 | .50 |

以上の分析結果から、3 つの主要な意見が浮かび上がった。
変化 1：「幼児期の終わりまでに育ってほしい 10 の姿」を意識して保育計画を考えるようになった。
変化 2：新しい幼稚園教育要領において「幼児期の終わりまでに育ってほしい 10 の姿」が明示された為、具体的にどんな姿に子ども達を育てたら良いか分かりやすくなった。
変化 3：今回の改訂で幼稚園から幼保連携型認定こども園となり、今までの教育という視点だけではなく、0 歳児を含む乳児期の子どもについて養護面という視点から保育をしなければいけないと思うようになった。

項目(d)についての仮説検証のためのコーディング分析

上記の探索的分析で得られた 3 つの変化について、それぞれにおける抽出語コードを作成し、それらがどれほど実際のデータに表出されているかを分析した結果を表 5 に示す。

表 5 項目(d)のコーディング分析

| 変化 | 抽出語コード | 標本($n$ = 15)中の出現回数 | 表出率 |
|---|---|---|---|
| 変化 1:「幼児期の終わりまでに育ってほしい 10 の姿」を意識して保育計画を考えるようになった。 | 幼児期の終わりまでに育ってほしい 10 の姿 or 意識 or 保育 or 計画 or 立て | 14 | 93.33% |
| 変化 2:新しい幼稚園教育要領において「幼児期の終わりまでに育ってほしい 10 の姿」が明示された為、具体的にどんな姿に子ども達を育てたら良いか分かりやすくなった。 | 幼稚園教育要領 or 幼児期の終わりまでに育ってほしい 10 の姿 or 詳細化 or 具体的 or 示された or わかりやすくなった or 明瞭 or 照らし合わせやすい | 9 | 60.00% |
| 変化 3:今回の改訂で幼稚園から幼保連携型認定こども園となり、今までの教育という視点だけではなく、0 歳児を含む乳児期の子どもについて養護面という視点から保育をしなければいけないと思うようになった。 | 幼稚園 or 幼保連携型認定こども園 or 教育 or 0 歳児 or 1 歳児 or 1 歳以上 or 2 歳児 or 3 歳未満 or 乳児 or 乳児期 or 子ども or 園児 or 養護 or 養護面 or 視点 or 保育 | 14 | 93.33% |
| コード無し | | 0 | 0.00% |

項目(e)についての探索分析

項目(e)について、全参加者($N$ = 27)中、5 名は要領改訂後に勤務を開始しており、5 名が苦労なしと回答し、2 名が無回答だったので、回答された 15 名の自由記述のテキスト分析を行った。その年齢層は表 6 に記す。

表 6 項目(e)の自由記述者の年齢層

| 年齢層 | A 幼稚園 (%) | B 幼稚園 (%) | 合計(%) |
|---|---|---|---|
| 20 代 | 2 (25.0%) | 0 (0.0%) | 2 (13.3%) |
| 30 代 | 3 (37.5%) | 2 (28.6%) | 5 (33.3%) |
| 40 代 | 2 (25.0%) | 3 (42.9%) | 5 (33.3%) |
| 50 代 | 1 (12.5%) | 2 (28.6%) | 3 (20.0%) |
| 合計 | 8 (100.0%) | 7 (100.0%) | 15(100.0%) |

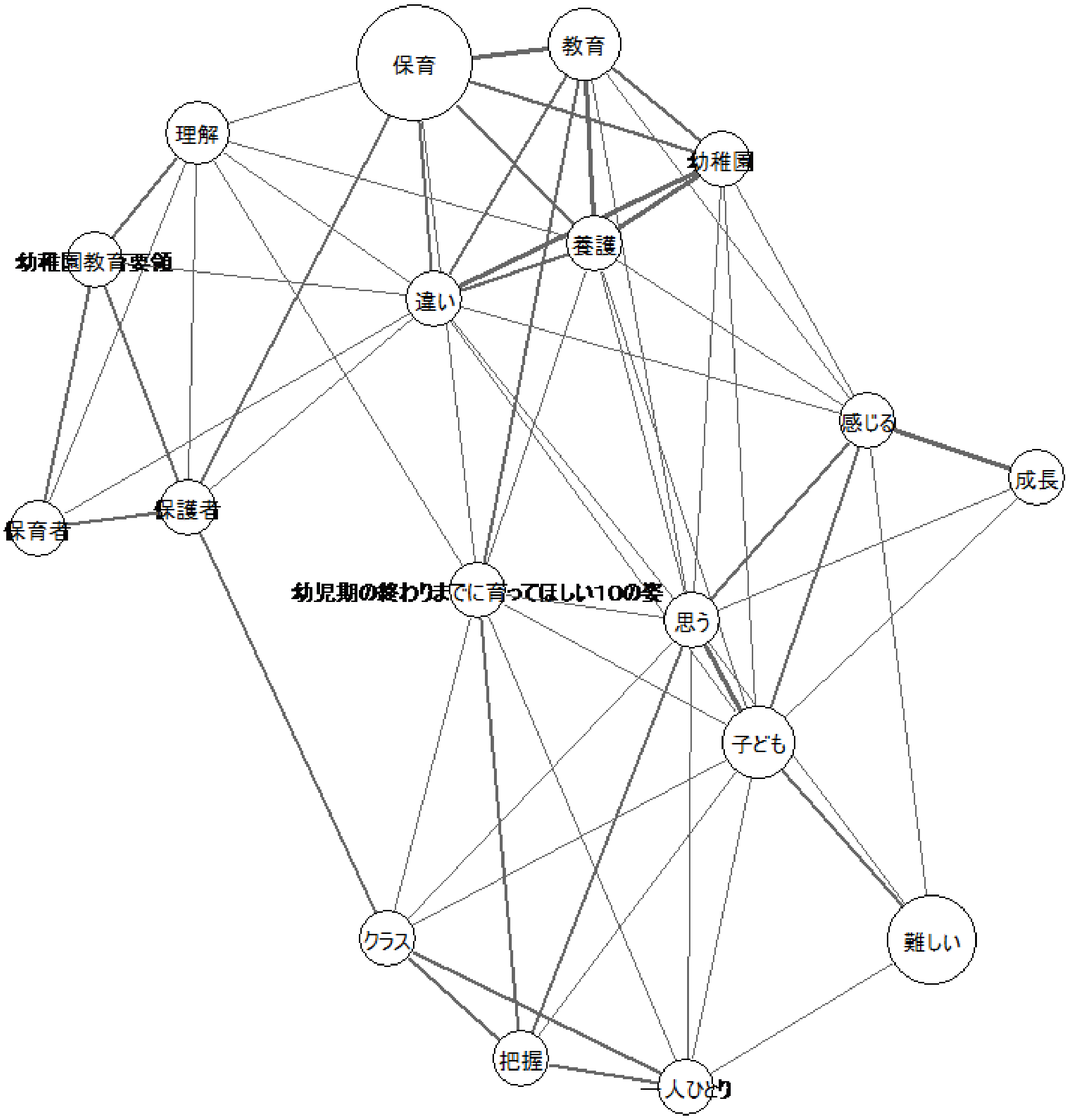
まず項目(e)の頻出語を抽出した。表 7 は出現回数が 2 回以上あった 40 語を示す。

表 7  項目(e)の頻出語

| 抽出語 | 出現回数 | 抽出語 | 出現回数 | 抽出語 | 出現回数 |
|---|---|---|---|---|---|
| 保育 | 10 | 幼児期の終わりまでに育ってほしい 10 の姿 | 3 | 見る | 2 |
| 難しい | 7 | 幼稚園 | 3 | 現在 | 2 |
| 教育 | 5 | 幼稚園教育要領 | 3 | 考える | 2 |
| 子ども | 5 | 養護 | 3 | 差 | 2 |
| 理解 | 4 | 0 歳児 | 2 | 最初 | 2 |
| クラス | 3 | それぞれ | 2 | 重要 | 2 |
| 違い | 3 | 意識 | 2 | 深める | 2 |
| 一人ひとり | 3 | 違う | 2 | 人 | 2 |
| 感じる | 3 | 育ち | 2 | 担当 | 2 |
| 思う | 3 | 園 | 2 | 得る | 2 |
| 成長 | 3 | 応じる | 2 | 内容 | 2 |
| 把握 | 3 | 環境 | 2 | 連携 | 2 |
| 保育者 | 3 | 苦労 | 2 | | |
| 保護者 | 3 | 計画 | 2 | | |

次に共起ネットワークを描き、共に出現する確率の高い語のパターンを調べた。図 2 は項目(e)の共起ネットワークであり、出現数が 3 回以上の語のみが描かれている。出現数が多い語ほど大きい円で、また共起関係が強いほど太い線で描画されている。

図 2 項目(e)の共起ネットワーク




続いて、類似する回答をグループ分けするためにクラスター分析を行った。なお分析方法の詳細は項目(d)の場合と同様である。

表 8 は出現回数が 2 回以上あった語を使用したクラスター分析の結果を示す。
表 8  項目(e)のクラスター分析

| クラスター番号 | 各クラスターに含まれる文書数 | 各クラスターの特徴語 | Jaccard 係数 |
|---|---|---|---|
| 1 | 6 | 難しい | .63 |
| | | 子ども | .43 |
| | | 一人ひとり | .33 |
| | | 成長 | .33 |
| | | 担当 | .33 |
| | | 思う | .29 |
| | | 感じる | .29 |
| 2 | 4 | 教育 | 1.00 |
| | | 養護 | .75 |
| | | 保育 | .67 |
| | | 幼稚園 | .50 |
| | | 最初 | .50 |
| | | 0 歳児 | .50 |
| | | 幼児期の終わりまでに育ってほしい 10 の姿 | .40 |
| | | 違い | .40 |
| 3 | 5 | 理解 | .50 |
| | | 深める | .40 |
| | | 保護者 | .40 |
| | | 連携 | .40 |
| | | 幼稚園教育要領 | .40 |
| | | 現在 | .40 |

以上の分析結果から、3 つの主要な意見が浮かび上がった。
苦労　1：担当する子ども一人ひとりの成長を把握しながら「幼児期の終わりまでに育ってほしい 10 の姿」を実現するのは難しいと感じる。
苦労　2：今回の改訂で幼稚園から幼保連携型認定こども園となり、今までの教育という視点だけではなく 0 歳児を含む乳児の保育という養護という視点との違いを考慮しながら「幼児期の終わりまでに育ってほしい 10 の姿」を実現するのは難しいと思う。
苦労　3：保育者と保護者間だけではなく保育者間でも新しい幼稚園教育要領への理解を深めて連携をとることは難しいと思う。

項目(e)についての仮説検証のためのコーディング分析
上記の探索的分析で得られた 3 つの苦労について、それぞれにおける抽出語コードを作成し、それがどれほど実際のデータに表出されているかを分析した結果を表 9 に示す。
表 9 項目(e)のコーディング分析

| 変化 | 抽出語コード | 標本($n$ = 15)中の出現回数 | 表出率 |
|---|---|---|---|
| 苦労 1：担当する子ども一人ひとりの成長を把握しながら「幼児期の終わりまでに育ってほしい 10 の姿」を実現するのは難しいと感じる。 | 担当 or 子ども or 一人ひとり or 個々の or 成長 or 育ち or 把握 or 幼児期の終わりまでに育ってほしい 10 の姿 or 援助 or 難しく or 難しい or 思う or 感じる | 9 | 60.00% |
| 苦労 2：今回の改訂で幼稚園から幼保連携型認定こども園となり、今までの教育という視点だけではなく 0 歳児を含む乳児の保育という養護という視点との違いを考慮しながら「幼児期の終わりまでに育ってほしい 10 の姿」を実現するのは難しいと思う。 | 幼稚園 or 幼保連携型認定こども園 or 0 歳児 or 1 歳児 or 2 歳児 or 未満児 or 乳児 or 乳児 or 子ども or 教育 or 養護 or 養護面 or 視点 or 保育 or 幼児期の終わりまでに育ってほしい 10 の姿 or 援助 or 難しく or 難しい or 思う or 感じる | 13 | 86.67% |
| 苦労 3：保育者と保護者間だけではなく保育者間でも新しい幼稚園教育要領への理解を深めて連携をとることは難しいと思う。 | 保育者 or 保護者 or 職員間 or 幼稚園教育要領 or 理解 or 深め or 連携 or 難しい or 思う or 感じる | 13 | 86.67% |
| コード無し | | 0 | 0.00% |

**考察**

本研究では 3 つの変化が浮かびあがった。それらを要約すれば、新しい要領において「幼児期の終わりまでに育ってほしい 10 の姿」が明示された為、幼稚園教諭がどの程度まで子ども達を育てたら良いか分かりやすくなった結果、その姿を意識し、かつ 0 歳児を含む乳児期の子どもについて養護面という視点を取り入れた保育計画を立てるようになったという変化である。しかし、これらの変化に適応するために 3 つの苦労も浮き上がった。要約すると、新しい要領内容の理解について保育者と保護者間だけではなく保育者間でも差異があり連携が難しく、かつ子ども一人ひとりの成長が異なり、更に 0 歳児を含む乳児期の子どもについての養護は新しい課題なので「幼児期の終わりまでに育ってほしい 10 の姿」の実現は難しいとの苦労である。このような知見は要領改訂後の幼稚園の実情を調査した研究が少ないため貴重であると思われる。将来、要領改訂後の職務実践での変化と苦労を全国規模で調査することは有益であろう。

今回の要領改訂における特徴的な変化は「幼児期の終わりまでに育ってほしい 10 の姿」が明示されたことである（請川・深沢・德田・三上・加藤・松原, 2018)。それは本研究の分析結果からも重要な変化として支持されている。故に「幼児期の終わりまでに育ってほしい 10 の姿」に関する文部科学省自身の説明について考察したい。

「幼児期の終わりまでに育ってほしい 10 の姿」について、文部科学省(2018)は「到達すべき目標ではない」(p. 47)と述べており、内閣府幼保連携型認定こども園教育・保育要領の改訂に関する検討会座長は「幼児期に完成し、100％できるようになるということではなく、子どもたちが歩み出している方向を表しています。」(無藤, 2017b, p. 26)と記している。請川他(2018) もこれらの 10 の姿は到達目標ではなく、方向目標であると述べている。

一方で文部科学省(2018)は「幼児期の終わりまでに育ってほしい 10 の姿」について、「各幼稚園で、幼児期にふさわしい遊びや生活を積み重ねることにより、幼稚園教育において育みたい資質・能力が育まれている幼児の具体的な姿であり、特に 5 歳児後半に見られるようになる姿である。」(p. 47)とも記している。では、もし自分の担当する子どもたちの多くにこれらの 10 の姿が 5 歳児後半になっても見られない場合はどうすれば良いのか。自分の担当する子どもたちの姿がこれらの 10 の姿に向かって育っているようであればそれで良いのか。勿論、文部科学省(2018)は「一人一人の発達の特性に応じて、これらの姿が育っていくものであり、全ての幼児に同じように見られるものではない」(p. 47)と個人差について認めてはいるが、ではどの程度の個人差が許容されるのか。文部科学省(2018)が「幼児期の終わりまでに育ってほしい 10 の姿」を方向目標と規定することは、各幼稚園（幼保連携型認定こども園）と各教諭と各保護者の解釈と判断の裁量幅を大きくしている。このことが現場での混乱を招く要因のひとつとなっている可能性はある。方向目標であるとの規定に加えて、付随する形で最低限の到達基準が明示されれば、現場の教職員の不安感は減少すると思われる。

本研究のデータ分析における最大の弱点は、著者の主観性である。第一に、頻出語数は項目(d)では 33 語、項目(e)では 40 語となっている。これは KH Corder を使用した既存研究論文（青木, 2019）を参考にした語数となっている。また本研究で採用した共起ネットワークにおいては項目(d)も項目(e)も出現数が 3 回以上の語のみが描かれている。それはデータ解釈上、出現数が 2 回以上の共起ネットワークにおいては図示される語数が多過ぎ、出現数が 4 回以上の共起ネットワークにおいては図示される語数が少な過ぎると著者が主観的に判断したからである。第二に、出現回数が 2 回以上あった語を使用してクラスター分析を行った結果、項目(d)、項目(e)のそれぞれに 3 つのクラスターが発見されたことも、著者にとってデータの解釈が最も納得できるものだったからである。より少数もしくは多数のクラスターも見つけることは可能である。また、作成された仮説はコーディング分析によりその妥当性がある程度は支持されたが、それは量的研究の場合よりも不明瞭である。

最後に、本研究の分析結果の解釈には十分に注意を払う必要がある。それらは特定の地域における少数の非ランダム標本($N$ = 27)に基づくデータの分析結

果であるため、一般化には不適当であろう。全国規模のランダム標本に基づく研究が将来有望であると考えられる。

利益相反について

本研究に関して開示すべき利益相反事項はない。

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# Seafood Supply Chain in Japan and the Sultanate of Oman

**Pawel Mlodkowski [1] and Rakesh Belwal[2]**

**Abstract**

This paper delves into the organization of domestically caught seafood and its supply chains in Japan and Oman. A diligent comparison is motivated by the traditionally significant role of individual fishermen in both countries in food security as well as the provision of nutritious food to households. The study is based on a field survey of individual fishermen, supplemented with direct interviews with other stakeholders (i.e. government and NGOs) in both national fisheries. The comparative analysis sheds light on the organization of on-shore and off-shore activities that involve several intermediary stages between producers and consumers. Results suggest numerous, and still different reasons for the current situation faced by individual fishermen and households in Japan and Oman.

JEL Code: Q22.

**Keywords:** Japan, Oman, fishery sector, on-shore, seafood, individual fishermen, fisheries cooperative, comparative organizational culture.

## Introduction

Fishery and aquaculture belong to the most ancient professions in Japan and the Sultanate of Oman. Fishing, as an economic activity, is rooted deep in the cultural and social fabric of both countries. In the case of Oman, it had been the prime source of livelihood for almost 80% of the population before the discovery of oil (World Bank Group, 2015). Oman enjoys a specific climate and easy access for her people to either the Gulf of Oman or the Arabian Sea, which makes fishing a natural response to seek subsistence given the choice between agriculture and fisheries. Omani fishermen have direct access to the Arabian Sea and the Indian Ocean through a 3,165 km long coastline. All coastal settlements have cultivated fishing as their major traditional lifeline.

[1] Department of Comparative Culture, Miyazaki International College, Japan
[2] Faculty of Business, Sohar University, Sultanate of Oman

From time immemorial, the inhabitants of the coasts in Japan and Oman have used wooden vessels to catch fish for household consumption, barter, and trade (Agius, 2010; Blumenthal, 1976). Any excess supply of fish was cured using salting and drying processes and was taken to the inlands for trade. Batinah Governorate has been famous as the origin of artisanal fisheries in Oman (Al Habsi, 2012). A similar role in the national fishery sector has been enjoyed by Miyazaki Prefecture for many years, with Aoshima as the most productive fishermen cooperative in Japan, (Fisheries Cooperative Statistical Yearbook 2020).

In Japan, dependence on fishing as a source of nutrients has always been the highest among the advanced economies. Not only the location of her islands in the Pacific Ocean, but also the presence of mountains (i.e. non-agrarian land) has been contributory for this favourable situation.

In the current research, we study the manner of domestic production of seafood, and the organization of its supply chain activities in both Japan and Oman. Given fishermen at the fulcrum of this chain, we also answer some key questions about the situation of individual fishermen to establish key linkages between the production, organization, and the supply chain management of fishing activities in both Japan and Oman.

The paper is structured as follows. The next section (Section II) presents briefly the current situation of the fisheries sector in Japan and Oman. Section III describes and compares the organization of the effort of individual fishermen in Japan and Oman. Section IV concludes the findings with a final remark.

## Fishermen's Current Situation in Oman and Japan, in Brief

Japanese society and the underlying economic system have been in the process of an unprecedented adjustment to the implosion of the population. The ageing of society and associated modifications to the manner in which production, distribution, and consumption are organized have already started. Contemporary problems in fisheries are numerous. One of them is a disproportionately lower income level of individual fishermen in Japan, when compared with other sectors. Negative effects in the form of discouraging new entrants have been observed for many years. Official statistics for Japan allow us to recognize the declining number of fishermen and the diminishing fishing fleet since 1995 (Table 1 and Table 2). Local fishermen communities, organized in the form of cooperatives, suffer from the abovementioned demographic trends.

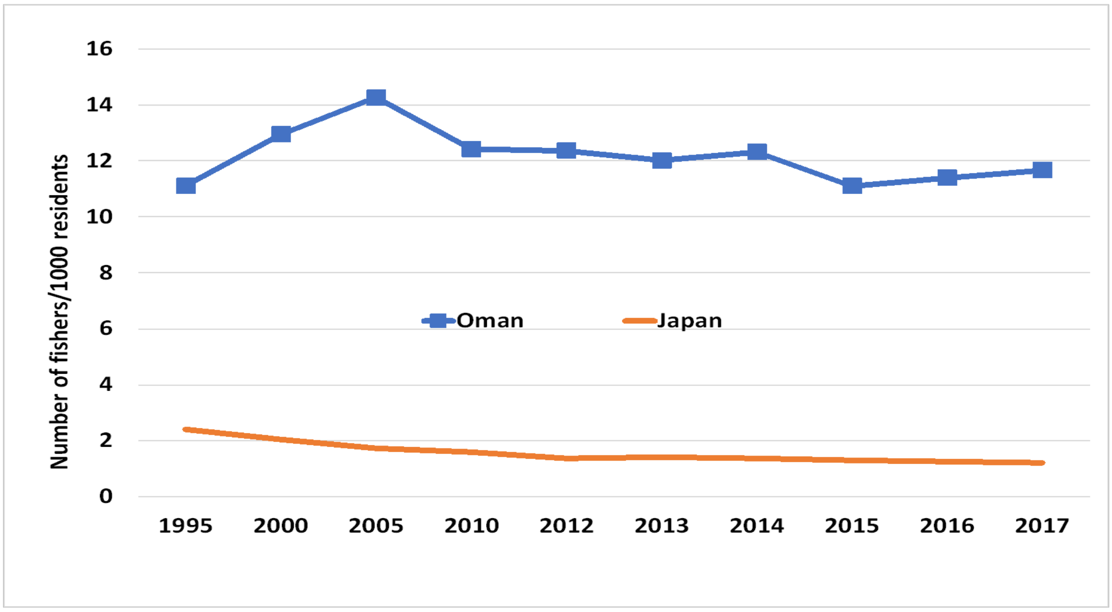
*Table 1 Number of Fishermen in Japan and Oman 1995-2017.*

| | 1995 | 2000 | 2005 | 2010 | 2015 | 2017 | Per cent change 1995-2017 |
|---|---|---|---|---|---|---|---|
| Japan | 301,440 | 260,200 | 222,170 | 202,880 | 166,610 | 153,490 | -49% |
| Oman | 24,490 | 24,490 | 24,490 | 37,758 | 47,385 | 54,410 | +122% |

Source: Fisheries and Acqacultural Statistics, FAO Yearbook 2018.

In absolute terms (Table 1), and in relative terms (Figure 1), these statistics reveal a contrasting trend. Whilst the number of fishers has declined over time in Japan, it has significantly increased in the case of Oman. According to the most recently released statistical information available for Oman, there have been 49,299 individual fishermen in the Sultanate. They have been operating 23,232 registered small fishing boats. The catch has been delivered to as many as 127 landing sites with continuously improved quality of equipment, and facilities. There have been 24 specifically equipped seaports for fishermen in Oman (Muscat Daily, 2018). For the Sultanate, the reason for expanding seafood production capacity by increasing labor and capital endowments lies in growing domestic demand. It is mainly caused by the surge in the total population. Over a very short period, there has been a substantial inflow of expatriates, matching the locals at almost 1:1 ratio.

*Figure 1 Number of fishermen per 1000 residents in Japan and Oman, 1995-2017.*




*Source: Authors, based on FAO's Fisheries and Acqacultural Statistics, FAO Yearbook 2018.*

Figure 2, pertaining to the relative number of fishing vessels in Japan and Oman, indicates a similar trend. The number of fishing vessels has declined in Japan since 1995. This trend has continued in the most recent years. Table 2 shows that, in the case of Oman, the fishing fleet has more or less levelled off before 2010, but has increased significantly over the following decade. The reason for investment in the expansion of the seafood production (capture) capacity by 2.4 times between 2005 and 2017 also lies in the demographics of Oman. During the period 2000 to 2017, the population to be supplied with nutrients has increased more than twofold.

*Table 2 Number of Fishing Vessels in Japan and Oman.*

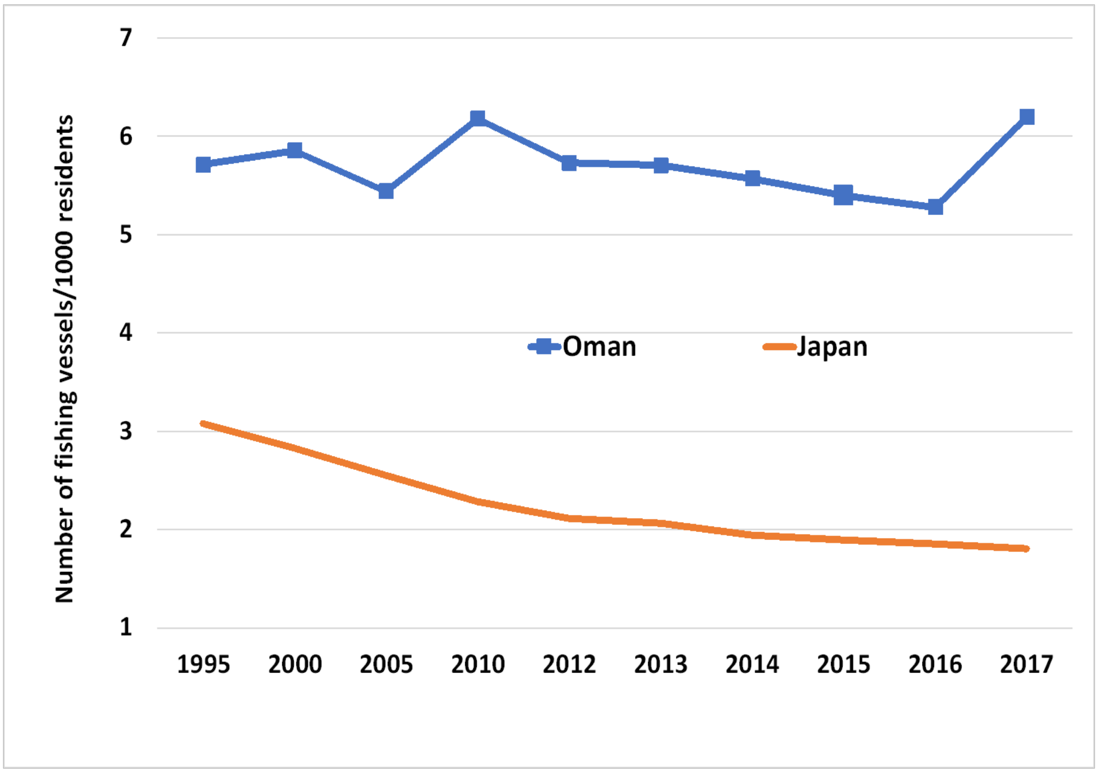
| | 1995 | 2000 | 2005 | 2010 | 2015 | 2017 | Per cent change 1995-2017 |
|---|---|---|---|---|---|---|---|
| Japan | 372,090 | 347,142 | 317,332 | 283,925 | 235,769 | 224,575 | -39% |
| Oman | 10,452 | 11,134 | 10,263 | 15,352 | 19,091 | 24,050 | +130% |

*Source: Fisheries and Acquacultural Statistics, FAO Yearbook 2020.*

When analyzing information provided in Figure 1, Figure 2, Figure 3, and Figure 4, one can recognize a number of characteristics of the fisheries sector in Japan and Oman. While the number of fishermen in Japan has declined from 2000 to 2017, the average capture per fisherman has increased continuously. This is a vivid sign of efficient and successful substitution of labor with capital. Such a situation means that the loss resulting from employing fewer fishermen is netted off by utilizing modern technologies and specialized equipment. Together, these factors allow for maintaining or even improving productivity per fisherman. Since 2012, this ratio has been ‘above-20' tons per fisherman per year (Figure 4).

Productivity in Omani fisheries is much lower than the productivity in Japan. It remains around 5 tons per year. This is a result of smaller-scale individual fishing efforts in Oman than in Japan. However, when it comes to total domestic production per citizen (in Japan) and per resident (in Oman), the Omani fisheries sector has been able to provide relatively more. Accordingly, the production per resident in Oman was recorded at 75 kg per year, while in Japan it was 25 kg per year (Figure 3). It argues well for Oman to become a potential exporter of fish and derivative products, while it sees Japan as a giant importer of seafood in the future. A question remains if the current level of fisheries sector production in Oman would be sustainable in the long run. These kinds of considerations are common among the experts and the politicians at the local and global level due to environmental concerns and sustainability of sufficient income in the post-oil era.

*Figure 2 Number of fishing vessels in Japan and Oman per 1000 residents.*




*Source: Authors, based on Fisheries and Aquacultural Statistics, FAO Yearbook 2017 and Statistical Yearbook (2018), National Centre for Statistics and Information, Sultanate of Oman.*

The fisheries and demographic statistics combined provide other interesting insights into the nature of individual fishermen efforts in Japan, and in Oman. Not only the scale of operations but also the saturation of capital in the fishermen's mobile workplace seem to be very different. These are large-scale fishing corporations that dominate Japanese fisheries responsible for the 15-ton gaps presented in Figure 4. Even at individual fishermen level the ability to catch (i.e., fishing boats capacity and fishing equipment), and then to keep the catch fresh (i.e., refrigeration), and then to deliver the catch to markets (i.e., fisheries cooperative facilitation) reveal a bigger potential and actual output by Japanese.

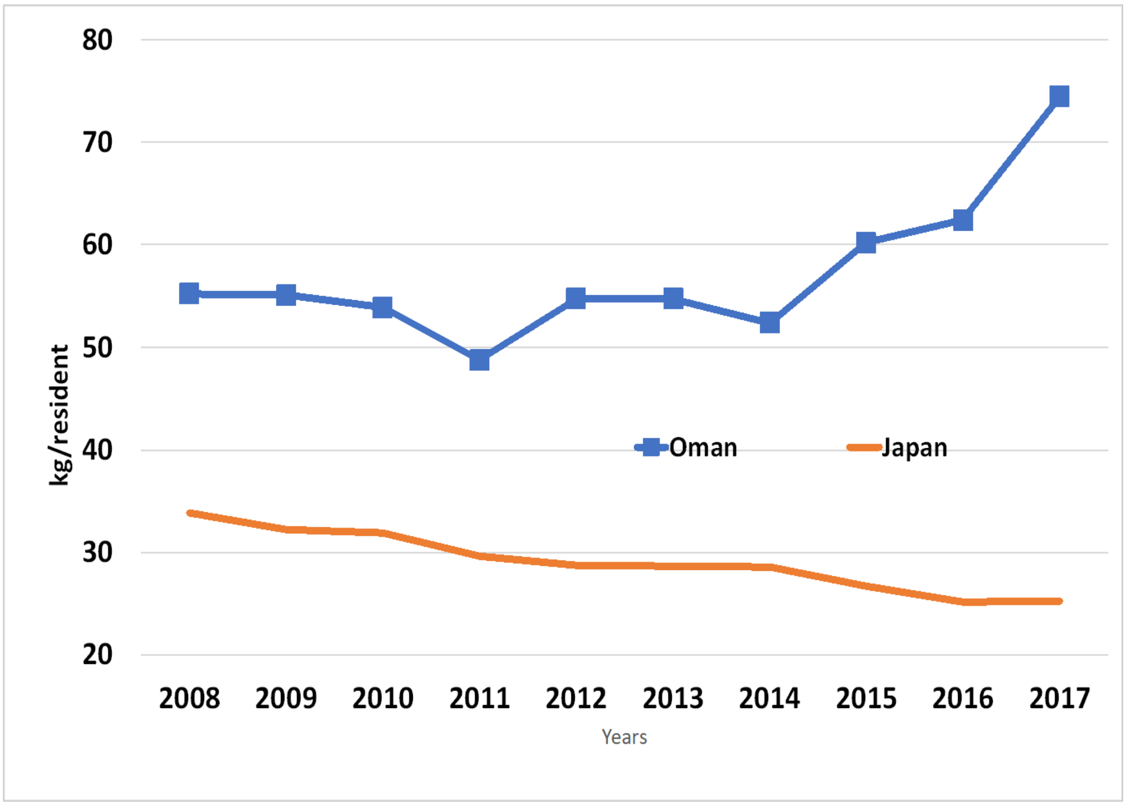
*Table 3 Capture production (Fish, crustaceans, mollusks, etc.) in thousand tons, and relative, per one citizen in Japan and per one resident in Oman, 2009-2017*

| | 2009 | 2011 | 2013 | 2015 | 2017 | % change 2009-2017 |
|---|---|---|---|---|---|---|
| Japan (thousand tons) | 4,126.5 | 3,790.6 | 3,651.1 | 3,395.2 | 3,204.3 | -22% |
| Japan:capture production per 1 citizen, kg | 32.2 kg | 29.6 kg | 28.6 kg | 26.7 kg | 25.2 kg | -21% |
| Oman (thousand tons) | 158.55 | 158.56 | 206.16 | 257.02 | 347.53 | +119% |
| Oman:capture production per 1 resident, kg | 55.1 kg | 48.7 kg | 54.7 kg | 60.2 kg | 74.4 kg | +35% |

*Source: Authors, based on Fisheries and Aquacultural Statistics, FAO Yearbook 2017 and Statistical Yearbook (2018), National Centre for Statistics and Information, Sultanate of Oman.*

In the real terms of fish production (Rows 2 & 4 in Table 3), one can notice the strikingly different level of production. The comparison of data for Japan over time indicates that domestic seafood production has declined considerably over the last 10 years. However, in the case of Oman, it has substantially increased over the same period. Increased output of the domestic fishery sector was fueled by a dynamic expansion of domestic demand. No other country experienced a two-fold increase in population, as was the case with Oman between 2000 and 2017. Some of the observed seafood output expansion in real and in relative terms should be attributed to government policies and actions. Oman enjoys one of the biggest oil and gas reserves in the world (WDI 2020), the wise management by late Sultan Qaboos bin Said has opened a new chapter of diversification of the domestic production structure. The ultimate goal of the Government of Oman is to make the Omani economy independent of its non-renewable resources. The 2014-2017 expansion of the fisheries sector seems to be the first positive development in the intended direction. Not only the self-sufficiency ratio of the fisheries in Oman, which is above 100%, but also the growing potential of seafood exports add to the stability of the exchange rate regime in the future.

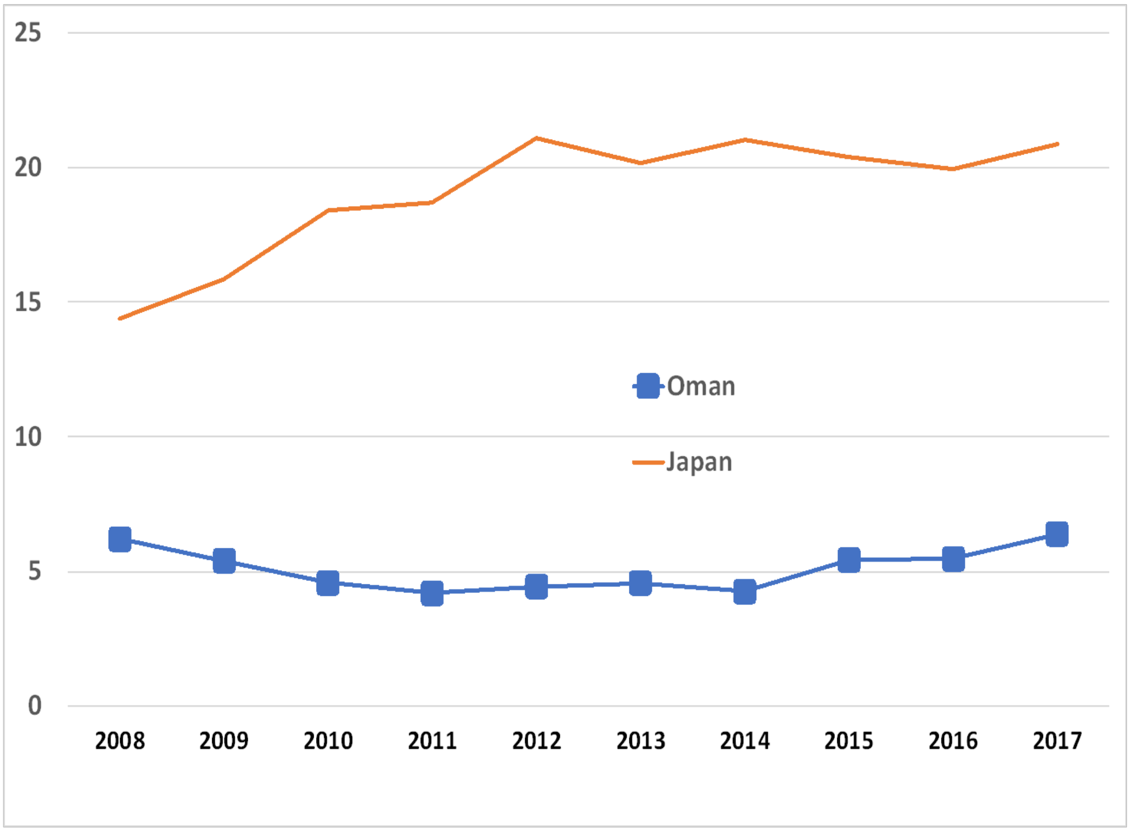
*Figure 3 Domestic fisheries sector output in Japan and Oman per 1000 residents, 2009-2017.*




*Source: Authors, based on Fisheries and Acqacultural Statistics, FAO Yearbook 2017 and Statistical Yearbook (2018), National Centre for Statistics and Information, Sultanate of Oman.*

Unlike Japan, the Sultanate of Oman enjoys seafood production that exceeds the domestic demand. The population of Oman (including expatriates) stands at 4.6 million. Around 72% of its indigenous population is younger than 35 years (Statistical Yearbook, 2020). The annual fish production in 2019 was about 350 thousand tons, of which almost one-third was exported (Statistical Yearbook, 2020). There was around a 25% increase in total seafood production in 2019 (Statistical Yearbook, 2020). The two sources of fish produced in Oman are long-cherished traditional fishing, and recently developed aquaculture. The Japanese economic system has been very similar in this regard. Aquaculture has kept increasing its share in total seafood production in Japan. It has gained importance in improving self-sufficiency of the Japanese economy in the provision of nutrients. Japan, however, remains number one on the list of developed economies with the lowest self-sufficiency ratio, at 37% (Japan Times 2019). Japan has also been the second biggest (after the U.S.) seafood importer in the world (Seafood Demand, 2019). The main suppliers of seafood for Japan have been the U.S., Russia, Canada, China, Vietnam, India, Indonesia, and the Philippines.

*Figure 4 Domestic seafood production per one fisherman in Japan and Oman 2008-2017 in tons.*




*Source: Authors.*

Oman has been a big exporter of seafood, with most of its exports (73%) destined for neighboring Gulf countries, followed by America (18.1%) (Statistical Yearbook, 2018, p. 165). However, at the same time, Oman is also an importer of fish and derivative products. Exports and re-exports of fish, and fishery products, in 2017 were valued at

USD 114.5 million, while imports amounted at USD 63 million amidst the average annual per capita consumption of about 28.7 kg (FAO, 2019)

The situation in the fisheries sector globally is about to change. In the case of Oman, there has been a transformation to adjust the lifestyle to modern technologies, albeit slowly (Bose et al., 2017). Fishing is still considered artisanal, and traditional. Most of the Omani fishermen do not have any access to devices such as GPS, fishfinder, sonar for depth calculation, or enabling technologies that integrate them forward with the market, or backward with suppliers.

In Japan, the situation has been driven significantly by negative demographic trends. These represent a serious challenge for all stakeholders. Substantial adjustments should be expected to take place.

Summarizing, there have been some similarities between Japan and Oman, in regard to the fisheries sector situation, barring the contrast in the average age of the population, and of the fishermen. Similarities concern the significance of the fisheries sector and the traditional manner of organizing fishing efforts in both countries in the past.

**Organization of Seafood Supply Chain in Japan and Oman**

The supply chain for domestically produced seafood in both Oman and Japan starts with an individual fisherman's effort. It ends with households' consumption after spending at retail outlets (Figure 5). The manner in which each national economic system organizes production and distribution of seafood is driven by a wide variety of factors. These include culture and traditions. For outsiders, it may appear that the initial stage of seafood production is organized in a similar manner in all countries. However, in reality, as we are about to reveal, there are significant differences in this regard between Oman and Japan.

*Figure 5. Seafood supply chain stages in Japan and in the Sultanate of Oman.*

Japanese supply chain for domestically produced seafood.

| | | | | | | |
|---|---|---|---|---|---|---|
| Individual Fishing Effort | JF cooperative intermediation | Auction at a regional market | Broker intermedia-tion | Wholesaler intermedia-tion | Retailer interme-diation | House-hold consump-tion |

Omani supply chain for domestically produced seafood.

| | | | |
|---|---|---|---|
| Individual Fishing Effort | Auction at a local Market or (alternatively) Truckers | Retailer intermediation | Household consumption |

*Source: Authors.*

In the 1970s, most of the fish in Oman was sold directly to the local customer in coastal regions. Rarely was any sale consummated involving two intermediaries (Donaldson, 1979). The motive of fishermen to sell the fish was secondary to meeting the requirements of self, the fishing crew, their families and relatives, and often neighbors. The personal relations between fishermen and buyers made them dispose of their catch more cheaply than the price they could have realized in the local market (Donaldson, 1979). Only in the situation of a large catch, motorized craft, availability of transport (i.e., donkey), did fishermen prefer to sell the catch to the local market (Donaldson, 1979). Donaldson (1979) mentions that until 1970, all fish brought to a market had to be sold by a public auction, where a tax of 13-14% was levied on each sale by the auctioneer on behalf of the Muscat Government. However, these restrictions were lifted after 1970. Trader transporters would have opportunities, when individual fishermen lacking motorized transport could not move their catch to the local markets themselves (Donaldson, 1979). Smaller traders, having access to limited capital, restricted their sales operations to the local markets, whilst the ones having access to a larger capital would reserve transport to carry fish to markets as far as Mutrah in Muscat for better deals (Donaldson, 1979).

The retail outlets of fish in Oman until 1976 were palm-frond stores, containing tools, rock salt and cured fish. During 1974 and 1976, stores with cement and bricks started emerging restricting cutting, cleaning, and displaying to the ground level. The lack of clean running water affected the cleaning of tools and the fish (Donaldson, 1979). The other key operating characteristics of the fish retail and distribution activities during the 1970s can be exhibited by the following points (Donaldson, 1979):

- Supplies to the nearby settlements were made using donkeys as a means of transport.
- Supplies to the far-off settlements were made using motorized transport.
- Traders with motorized transport faced a higher risk in selling at distant coastal markets than those selling at local markets with a donkey.
- Traders with motorized transport had a better chance of profit while selling at the inland markets; however, the risk was there in case of the hired vehicle when the distance was long and the sources of supply were more than one.
- The market was always a suppliers' market, for the demand for fish was higher than the supply. The distributors and retailers were more dependent on the fishermen.
- Fish was not sold by weight but by pieces.
- The traders performed three main functions: the rapid disposal of fishermen's catches; the subdivision of large fish and the waste removal; and the curing of the surplus fish.
- In exceptional circumstances, the unsold fish was cured by the sun drying, wet salting, and dry salting processes to provide for periods of scarcity.

Oman has seen a rapid transformation in its fisheries industry since 1970. It was only 50 years ago that the Ministry of Agriculture and Fisheries was established. The Government of Oman, in its recent 8$^{th}$ 5-year plan, has disbursed 128 million OMR for advanced auction houses, cold storages, refrigerated vehicles, and other supply chain and delivery related mechanisms. The distribution and retail activities have benefited immensely from the establishment of new seaports, roads and fishing harbors. In addition, successful electrification and industrialization with a growing number of processing plants and ice factories has facilitated production and distribution of fish within Oman and other Gulf countries (World Bank Group, 2015). The number of fish processing plants that are key to promote retailing and distribution activities have increased to 59 in 2016 from 32 in 2010 (Statistical Yearbook, 2017).

After the year 2000, a number of initiatives were taken by the Government of Oman in compliance with the national economic plan "Oman Vision 2020". They were largely instrumental in the development of industrial estates, free economic zones, fishermen harbors and well-structured landing sites besides supporting the growing fisheries sector (Al Busaidi et al., 2015). Since 2000, the fisheries sector in Oman comprised three sub-sectors: artisanal fisheries, commercial fisheries, and aquaculture production. The modern supply chain system in the Sultanate emerged subsequently.

The supply chain in Oman has been composed of fishermen, transporters, traders, processors, exporters, retailers, and consumers. However, over time, the dealings in the artisanal fisheries sector have not changed much. The change has been limited to improvements in the infrastructure and the transportation system. Both of these factors provided fishermen with better access to markets.

Belwal et al. (2015) observed that almost 70% of individual fishermen in Oman dispose of their catch within an hour after landing. Only 8% fishermen store their catch for more than three hours. This is mainly due to the lack of a proper preservation and supply chain mechanism and the absence of the necessary infrastructure like fish processing plants.

To sum up, the organization of fishing effort and the subsequent supply chain activities in Oman still reflect much of the old traditional system. These two major activities have started transforming and benefiting from modern technologies only recently. Together, these factors bring undeniable benefits to the underlying society. Omanis and expatriates enjoy easier access to high-quality seafood at very attractive prices. The situation in Japan is somehow different, in terms of prices, but not the quality of seafood where the former are considerably higher than Oman. Another similarity exists in the relatively low-income level of individual fishermen households. This stands in contrast with expensive seafood available from Japanese retailers, as absolute and relative prices are higher in Japan than in most other countries. A systematic review of the system in which individual fishermen in Japan operate may provide several hints on the factors responsible for the current situation.

The first clearly recognizable difference exhibits in the fishermen’s style of working right at the beginning of the seafood supply chain. In Japan it is obligatory for individual fishermen to associate with the Japanese Fishery cooperative (JF). Omani fishermen should be, therefore, considered much more ‘individual’, when it comes to their off-shore, and on-shore efforts. The lack of economic freedom in the case of Japan has a long tradition and is often associated with communal lifestyle (Taylor 1983), and preference to work in a group (Taylor 1983). Individualism is, therefore, one of the distinguishing characteristics of Omani fishermen, when compared with their Japanese counterparts, who organize their effort collectively.

In the Japanese system, there appear to be significant barriers to entry for anyone interested in becoming an individual fisherman. The cost of a fully equipped new ship of tonnage around 4-8 tons, for fishing bonito, amounts to 800-900 million Japanese yen. It is an equivalent of almost 8-9 million US dollars. Such an initial investment seems beyond the access of the majority of, if not all, members of local communities of the relatively and absolutely poor citizens. There is also an exit fee for dismantling fishing boats and ships of fishermen who retire. According to an interview with a retired bonito fisherman, (currently working as a recruiter for Miyazaki Prefectural Fisheries Training Center), the cost of dismantling an old fishing boat of tonnage around 4 tons, amounts to 300 thousand yen, which is an equivalent of almost 3 thousand US dollars.

When there is an individual fisherman who wishes to become a member of a local fishery cooperative, there is a special *Qualification Screening Committee*. This committee comprises several members (usually between 8 and 16), who are the cooperative members, and representatives of the local (city) government office. One of the prerequisites of an application for membership is an accumulated working experience with another member of the cooperative of at least 3 to 5 years. Furthermore, a current member of the cooperative must introduce the candidate in the first place. An alternative way to become a member of a cooperative is the ownership of a fishing vessel, for which all other requirements and prerequisites do not apply. New members of a cooperative come from two cohorts. The first are graduates from the fishing training centers. The second are those who move from other sectors and meet the above-mentioned requirements.

Education of the prospective fishermen in Japan is strictly regulated by the government. This has been justified by the high risk associated with work in the sea and the need for expertise to operate special equipment. In Oman, two Fishermen Training Institutes have been established in Al Khaboura and Salalah. They provide occasional training to fishermen. However, the licensing of fishermen is not tied up with their technical education. In Japan, there are several categories of maritime skills. Japan has also classified these skills with levels, certifications and permits – in some cases. In the Japanese system of education, the lowest level of competence is denoted with a higher number (usually starting at fifth, or fourth grade), while the highest proficiency is always labelled ‘the first grade’. Training at the Miyazaki Prefectural Fisheries Training Center for new entrants takes one year. Prospective fishermen learn navigation, sailing with different categories of fishing ships, fishing techniques, and methods necessary to participate in fishing effort. They also learn about mechanics (engine operation technology) and gain technical skills in on-board equipment maintenance. A one-year program is designed for junior high school graduates. This cohort enters the training center at the age of 15. The school year for full-time students starts with Spring semester on the 1$^{st}$ of April and continues until the end of September. Education persists in the second semester from October to March. There is an alternative training program for other interested candidates, who move from other sectors of the national economy. Such candidates participate in training that can be flexibly managed, but they need to take two full semesters to obtain all the permits and certificates. Successful graduation from the training center brings a few certificates. All students are supposed to achieve the first (the highest) grade of Maritime Special Radio Operator. Aside from this ‘special’ radio operator category, prospective fishermen obtain 4$^{th}$ grade Maritime Radio Operator certificate. Then, students should also achieve the second grade of Permit of Boat Operator. The last element is based on a written examination. It is a certificate at 4$^{th}$ (or 5$^{th}$, for students who are unable to reach the 4$^{th}$ level) grade of Maritime Officer.

There are certain organizational and formal requirements for members of a fishery cooperative. It is mandatory to spend at least 180 days per year in the ocean to maintain membership. Members must continue with fishing as their main source of income. In case of discovering connections between a JF member and organized crime organization [or other anti-social forces, like yakuza], such a member will be cast away, expelled from his JF cooperative.

Benefits for individual fishermen in Japan, who are associated with cooperatives are numerous. One of the crucial benefits is that fishermen simply can deliver their catch of fish, shellfish, and other seafood to designated seaports. This is where cooperative office staff takes over and individual fishermen receive a fixed price for their catch. The payment of the due amounts takes no more than two days. The delivered seafood is properly stored and becomes subject to further processing to be promptly delivered to the next intermediary.

Grading of the delivered catch is done by the cooperative staff on arrival. This is also when the catch is weighed and recorded for official reporting. Grading is based on species, size, and quality. Cooperatives maintain facilities for keeping seafood alive, or properly refrigerated. Individual fishermen in Japan use a standard semi-refrigeration method to keep their catch fresh. All ships and boats used for fishing purposes have a separate section under the deck for holding the perishable cargo. This underdeck container is filled with water and ice cubes on departure. It is sufficient to keep all types of seafood fresh and preserved. It is only the cooperative office that maintains refrigeration facilities, and not individual fishermen. Cooperatives also secure aquariums for marine species traded alive.

The price of seafood which is a basis for calculating the actual payment for fishermen is decided by a broker, when the products are sold (auctioned) at a local wholesale market. The amount of money realized on the sale of seafood is then subject to two deductions. The first one is a sales commission paid to the company organizing and administering auctions. Auction houses charge a customary commission of 6.3%. The remaining amount is transferred to the fishery cooperative, which delivered the product. Then the cooperative deducts 6.7%, as its intermediation commission. This fee finances administration and operations of the cooperative. The remaining 83% of the wholesale price is the money that goes to individual fishermen in Japan. In the case of selling products directly at local shops, a cooperative office uses the quote from the broker as a benchmark, and the price actually paid to fishermen is higher by 10% than this benchmark.

The third channel for seafood supply in Japan is the sales made by fishery cooperatives directly. There are supermarket brokers, who are allowed to buy directly from fishery cooperatives, by avoiding the auction system route. However, cooperative offices face a problem from these brokers, who negotiate aggressively to obtain substantial discounts. Therefore, in the current system in Japan, individual fishermen experience a substantial loss in income when selling directly to such brokers.

When sales are intended for restaurants and hotels, there is a separate business, not associated with the cooperative. However, this intermediary between individual fishermen and retailers must accept the selling price as decided by the members of the cooperative. This should be appreciated as a form of protection for individual fishermen extended by the cooperative. The role of fisheries cooperatives is not restricted only to managing the catch and payments for seafood.

On a regular basis, often once per year, local communities of individual fishermen organize interesting and unique events (called *matsuri)*. The reason for these special festivals is to sell abundant amounts of expensive seafood and in this way to keep the wholesale price high. This applies especially at the beginning of seasons for particular species like lobsters or crab.

To understand why Japanese society developed cooperatives in this sector of the national economy, one must remember that there is a substantial lack of market literacy among Japanese fishermen. Such a situation creates a great need for broad and far-reaching assistance by institutions, and the government. The most important form of support for poorly educated and initiative-lacking individual fishermen are, therefore, fishery cooperatives. These institutionalized forms of organizational and technical support act as the middlemen between fishermen and the next stage in the seafood supply chain domestically. The most important benefits for individual fishermen resulting from membership in such cooperatives are as follows:

- Pricing seafood, based on grading according to size and species,
- Stable prices received by individual fishermen for their catch,
- Timely payments of due amounts for seafood (Japanese standard in this regard is to transfer money on the next day after fish is delivered),
- Cooperatives welcome and accept the catch without any quantitative limits,
- Cooperatives accept all rare species of seafood, finding buyers for every type of food – even a unique product.

The system described in detail may serve well in times of overproduction and tight market demand. However, as the population in Japan prefers a fish-focused diet, the domestic demand is maintained at a relatively high level, in comparison with other advanced economies. There has been a recognized trend, noticed by all interviewed Japanese fishermen, concerning systematic decline in the quantity and quality (i.e. size) of the catch, no matter which species are concerned. This indicates a recent problem of depletion of these marine resources due to intensive fishing. Under such conditions, Japan is a 'producers' market', with growing competition among consumers to obtain the desired seafood. This is a situation known very well from basic microeconomic analysis of producer-consumer interaction under scarcity. Prices of seafood in Japan have a good microeconomic reason to remain relatively, and absolutely, higher than in Oman that enjoys overproduction. This specific situation in Japan does not seem to bring proportional benefits to individual fishermen, who remain the poorest among members of the society. This evident income inequality problem is, however, beyond the scope of the current analysis. However, it may represent an opportunity for an interesting and meaningful future research on the vital issue.

## Conclusions

The paper presented the current situation of the domestically produced seafood and supply chain in Oman and Japan. It also offered a brief historical perspective for the Omani case. The description of every stage from producers (i.e. individual fishermen) to consumers (i.e. households) allowed for capturing the very nature of their respective situation. The real and relative statistics available for both countries aid in noticing trends present in both fisheries sectors since 1995. The situation of Japanese fishermen complies with the general demographic developments of population implosion. One could notice distinctly that the Japanese economy is able to substitute labor with capital effectively (comparing Figure 2, 3 and 4). This, in turn, allows production to be maintained at a stable level, and increases the productivity of the remaining labor. Contrary to this, the fisheries in Oman are still traditional and statistics indicate an increase in the number of both fishermen and the customers in recent years.

The Japanese fishermen seem to enjoy significantly more comfortable working conditions due to the obligatory association in JF cooperatives. Many of the recognized problems that hinder Omani fishermen activity have never been experienced by their Japanese counterparts. This is mainly due to JF cooperative pre-departure and post-landing assistance. However, there are significant restrictions imposed on individual fishermen in Japan. This means that the above-mentioned benefits are associated with rather significant costs. Japanese society seems to be perfectly fine working under such conditions, where individualism is reduced to the minimum (Taylor 1983), while communal behavior dominates most of the presented on-shore activities. The reported higher productivity of Japanese individual fishermen (Figure 4) should be related to the high saturation of capital in the 'workplace'. This characteristic is a consequence of the availability of different equipment utilized by fishermen in Japan and in Oman. The Sultanate seems to be still lagging behind in terms of fishing technology, even though its marine resources are among the richest in the world. A conclusion here is that there is still a great scope for improvement when it comes to efficiency. This, however, brings questions about the sustainability of the Omani fisheries sector. Individual interviews in both countries revealed widely recognized depletion of marine resources, at the current level of fishing intensity. The impression is that Japan suffers much more from reduced quantity and size of all species targeted. This places a great responsibility on governments to manage fishing efforts in a sustainable manner. Depletion, or local extinction of marine species are not easily reversible and are associated with substantial economic and social costs. While Japan may still revert to the larger import of seafood, based on revenue from its industrial products exports, Oman may not be able to follow a similar path. Low prices of crude oil that prevail in 2020 bring concerns about the sustainability of the current consumption level, and lifestyles. If there is another negative factor in the form of depletion of Omani marine resources, the situation may turn really grave.

The current situation and prospects for Japan may also be considered as problematic. The growing productivity due to substitution of labor by capital has its limits. The domestic seafood production will continue the negative trend already observed over a couple of years. The primary reason is no newcomers to the profession. This is due to relatively low remuneration for a substantial risk and effort required to work as a fisherman. The demographic implosion in Japan expected over the next few decades calls for actions aimed at supporting fisheries. Some see a solution in a foreign labor force, operating Japanese fishing vessels, while the central government promotes robotics, as a solution for all consequences of an aging society. Will we eat in the future seafood caught by robots, fish-bots, or androids?

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# Incorporating Yoga, Radio Exercises, and Meditation in a English Medium Instruction-based Anthropology class

Debra J. Occhi

**Abstract**
This paper describes the evolution of an English Medium Instruction-based Anthropology of the Body class with incorporation of Yoga, Japanese Radio Exercises and other similar exercises from various countries, and Meditation as awareness raising and mitigation for problems students experience due to sedentism of contemporary young adult life. These measures were implemented and researched in my ANT3111 (Topics) Anthropology of the Body class. As an innovative part of my pedagogy, this unit has undergone continual revision in a PDCA (Plan-Do-Check-Act) loop in order to improve contents and delivery throughout. The ultimate goal of this project is to expand offerings of exercise: radio taisō , yoga, and mindfulness meditation, in the university educational system, as seen in other universities worldwide, to mitigate the negative effects of academic life on the human body.

## Introduction

The problem I initially observed in classes and wished to ameliorate presents as poor posture, often leading to sleepiness and attention deficit, especially in classes scheduled after lunch, when humans tend to want to nap (Lovato, 2018). I initially chose to include research on the effects of poor posture, and incorporated seated mindfulness meditation with good posture for stress relief. Although arising from Buddhist and Yogic practices, meditation has been stripped of its cultural context, and various studies support its potential for improvement of mental health disorders (Wolkin 2015). The research findings that were taught in the class (Bos and Cuddy 2013, Cuddy 2015) indicate that poor posture has effects not only on presentation of self but as a hindrance to self-assertion. However, lack of exercise remained a problem. In response to these problems, and to add to the anthropological topics of the course, Japanese *rajio taisō* , radio exercise in various versions and other similar activities in other cultures, as well as relevant information about the development of these practices, became part of the curriculum. This improved the situation somewhat but still needed refinement. In Spring 2020, Zoom courses conducted during COVID-19 breakouts encouraged me to incorporate radio exercise more generally as an optional warm-up or breaktime activity in other classes. This meant that some students who had exercised then and later enrolled in ANT3111 for Fall semester had the opportunity to get used to doing exercise with peers before it was mandatory. And, upon completion of yoga teacher training in spring of 2020, I added chair yoga to the ANT3111 course when we started fall semester in face to face mode. Along with this expansion of the unit, I incorporated further meditation techniques, along with relevant topics of yogic science to give appropriate cultural recognition for yoga's Indian roots and anthropologically contextualize those practices as well. Student feedback indicated that this development was received well; I intend to make further revisions to this course and teach these methods more widely as appropriate.

It is common to think of college students to be at a peak stage of physical development as young adults, full of zest and vitality. It may even seem unnecessary for a university located on a hill colloquially known as 'bijin zaka' (beauty hill, so named for the imagined effects of walking up to the two-year junior college next door from the nearest train stop) and spread over three buildings ranging from three to five floors high, to offer exercise in the classroom to students. However, many of my students come by bus or drive their own cars to school, walking only from the bus stop or parking lot to class, and in the junior and senior years, may not be taking multiple classes that necessitate much movement around campus. And until the elevator was declared off limits due to COVID-19 in 2020, most students relied on it, avoiding the stairs. Lack of exercise was more common than engagement in sports. Especially for those students seemingly subsisting on canned coffee, cakey bread and cup noodles, lethargy creates motivational difficulties in class. Applied anthropology seemed to offer a way to confront these problems and encourage students towards better self-care, at least in one course I developed, Anthropology of the Body (ANT3111, now popularly known as 'the radio taisō class'). Three successive versions of the unit are discussed here, including the measures used, my participant observations, and student feedback that encouraged PDCA for the next version.

This is not the first teaching unit I developed using exercise in the university classroom. In 2006 following McDonalds' attempt at corporate responsibility by distributing DVDs of Yourself Fitness workouts, I incorporated TPR (total physical response)-guided lesson materials into a unit based on viewing and analysis of the documentary *Supersize Me* (Spurlock, 2004) in a Cultures of the USA second-year course that is no longer offered (Occhi & Golliher 2006, Occhi 2016). The unit was originally developed in response to student concerns that they would gain weight during the following semester abroad. In cooperative lesson development with team teacher English specialists (Sylvan Payne for the pre-exercise version; Russell Fauss, Roberta Golliher) students learned body part vocabulary and motion verbs included in the exercise videos, as well as nutrition vocabulary for the self-analysis based on the documentary and a McDonalds lunch of their choice. We offered this unit in hopes of fostering self-awareness of caloric needs, exercise habits, and fast-food nutrition levels, along with reinforcement of quantitative and qualitative research and writing skills taught in a previous unit of the course. Students in small groups taught peers parts of the DVD exercises in participative presentation format. They then entered the Study Abroad semester with portfolio writing skills and exposure to self-care strategies that potentially helped them avoid the weight gains they feared. However, curricular revisions resulted in a reassignment of the course as a solo-taught English course, and the unit was shelved.

**V.1**

Similarly, in the unit of focus in this paper, I began with an attempt to foster self-awareness, incorporating exercise in further iterations of the course. In Fall 2016 I first taught a unit focusing on posture and stress relief in the upper-division course Anthropology 3111 (Topics: Anthropology of the Body), in an effort to encourage critical thinking about everyday habits and instill an ethic of self-care. We studied topics including the problems of poor posture leading to long-term fascial changes from excessive sitting and slouching. Along with self-study of sitting and exercise habits, we examined the research on the negative effects of poor posture on personal presentation, and of using small electronic devices like cell phones on self-esteem and willingness to ask (Bos and Cuddy 2013, Cuddy 2015). This fit in along with the other course contents: cultural approaches to illness and healing, and other appropriate topics such as genetic evidence for early human migration out of Africa. This unit has been expanded since then, reflecting student needs, the changing social environment with COVID-19, and my professional development. The exercise component added a variety of exercises at the beginning of each class, depending on the weather and situation. These include Japanese radio taisō of various types, similar exercises from other countries (e.g., Singapore), and yoga (since 2020 when I earned yoga teacher training licenses), with the cultural details about those activities used as part of the content for the Anthropology focus of the course.

PDCA: The 2016 version of the course, however, contained only the self- and academic study of sedentism and mindfulness meditation. I had taken two mindfulness courses online with Monash University in 2015 and, finding beneficial results in lowering stress levels, wanted to share that with students. Though I had enjoyed the Australian accents of the speakers in those courses' guided meditations, many students reported that they found them hard to understand, and some fell asleep. So I switched to the UCLA Mindful Awareness Research Center meditations (2017), printing the texts for students to read beforehand with vocabulary support, which seemed to help that problem. Then on the final exam of the Fall 2016 course, I asked students how they could mitigate the problems of sedentism. Here is an unedited example of a student response (name withheld for privacy) that convinced me to add exercise to the class.

1. **How can MIC help students keep healthy?**
   **( knowing what you know sitting, facia)**
   I think keep sitting feel tired during classes. Sometime I do not fit the balance between chair and desk. If I choose such a desk and a chair, I feel uncomfortable. I like the chair which can adjust the height position because everyone is different height between body and legs. In addition, all classes have a break during a class. It is good time to move or stretch the body.
   I think the most important things to keep healthy is good sleep, good food, and exercise. MIC can help about food and motion. For example, there is a meal restaurant here. The restaurant can provide the good food which are thought of health. About exercise, I think that to make events is good for exercise. There is sport festival in MIC. It is good idea and it is good opportunity to move the body and in event people can enjoy with moving their body. It is good thing, but it cannot hold so many time. Focusing on the daily life, to pick up the trash which are falling on ground is good

> exercise. Between the classes, most people move to different class. To pick up the trash, people need to squat. And to pick up the trash, school will be clean and everyone will feel clean also. It can be good health for mental and physical.

Student responses like this provide important feedback to improve future iterations of the course. Given that trash on the ground and sports festivals are relatively rare occurrences in contrast to everyday sitting in class, this response indicated that there was still room for improvement of students' movement habits.

**V.2**

In order to avoid perpetuating the absurdity of studying the problem of sedentism while continuing to contribute to it, with administrative approval in 2017 I actively incorporated exercise (the Japanese *rajio* taisō radio exercise routine) starting with English subtitles into the course contents, followed by mindfulness meditation (from UCLA MARC, 2017) that used simple scripts I had printed and distributed. This ensured that everyone would move, instead of offering open-ended break time during which many students curled up and tapped their smartphones; by studying the scripts, they could understand the meditation rather than feel disengaged and sleep. I chose radio exercises for several reasons. In the typical majority Japanese student class, many will have done these exercises as children and may know them by heart. For non-Japanese students, learning these commonplace exercises will enhance their cultural knowledge of Japan. The two routines are short and simple, and provide a gentle stretch, particularly expanding the chest and encouraging spinal mobility. This was important to counteract slouching and other poor postural habits. And, there are several versions available on YouTube, for instance in English or Japanese dialects, with actors dressed as cute characters, etc., that could alleviate potential boredom with the same motions. I also taught vocabulary related to body parts and movements as in the Cultures of the USA course discussed above, analyzing the English language versions of radio exercise as language input as well.

Various research studies support the provision of exercise to students, to the extent that many universities offer live and videotaped exercise classes. Bour et.al.

conducted research comparing the effects of 30 minutes exercise done in one chunk versus in 5 minute breaks every 60 minutes, providing “the first evidence that microbursts of activity during the day improve energy level, mood and fatigue level, while maintaining usual levels of cognitive function (Bergouignan, A., Legget, K.T., De Jong, N. *et al.*, 2016). These brief activity periods provided more sustained benefits including mood and fatigue levels throughout the day than a single exercise session done in the morning (ibid). Meditation also has measurable benefits (Wolken 2015) and has become increasingly part of college offerings to student health promotion, with the Monash University and UCLA research centers as indicative of this movement.

**PDCA**

Incorporating radio exercise as well as teaching the meditation script was a good idea; fewer students were drowsing off. It can be a challenge to the language learner to meditate in a foreign language, as my own experience as a meditator and as a teacher has revealed. Key body part terms that students did not know initially were “nostrils” and “abdomen”, to which a meditator’s attention is often directed in mindfulness scripts. The UCLA 5 minute script invites the listener to sit in an upright, relaxed position, observing the natural flow of breath, along with any internal sensations. The wandering mind commonly experienced by meditators is addressed with kindness and redirected to the breath:

> ...When one breath ends, the next breath begins
>
> Now as you do this you might notice that your mind might start to wander
>
> You might start thinking about other things
>
> If this happens this is not a problem
>
> It's very natural
>
> Just notice that your mind has wandered
>
> You can say "thinking" or "wandering" in your head softly
>
> And then gently redirect your attention right back to the breathing
>
> So we'll stay with this for some time in silence

Just a short time

Noticing our breath… (UCLA MARC:2017)

This five-minute meditation ends with suggestions to feel gratitude towards the self for doing the practice; both these strategies evoke the concept of 'lovingkindness' that mindfulness meditations have adopted from *metta* ("love" in Pali, *maitri* in Sanskrit) meditations associated with Buddhism (O'Brien 2020). Students reported that meditations calmed them, and the overall energy level of the class seemed to increase.

However, some students still seemed to resist the idea of exercise. Some wore shoes and apparel that was hard to move freely in or resisted by doing minimal movement, for example folding in at the elbow (which I called 'chicken arms'). Much of the radio exercise was intended to open the front body with the arms spread wide, which was resisted by some despite my efforts to spread them out away from peers or the wall. This 'chicken arms' problem thwarts the intent of encouraging better posture through the radio exercises and other exercises. I resolved to be more explicit in the syllabus and verbally, that exercise was not optional, counting exercise participation as part of the overall class participation score. I also incorporated similar videos of other countries, for example the Great Singapore Workout in its variations, with discussion of the demographics of the participants in the 2015 video, and the cultural particularities of movement in the 2018 version. This seemed to help student interest and participation levels; the course remained in this format for the 2018 and 2019 iterations, with minor variations in the exercise videos used.

In spring semester the ANT3111 course is usually not on the roster, but during spring 2020 in the COVID-19 driven periods when classes were done on Zoom, I often started my other classes with one of these exercise videos. That took up the slack moments while students were joining the class; early birds could get the full benefit. I tried finding appropriate versions to each class' topic, for instance, the radio taisō that a fan made using Beat Saber game software (NALALUNAChannel 2020) was appropriate to use in classes on Japanese character culture and on avatar society. Most students were attending classes while at home in casual clothes and were willing to participate, even though I did not require them to do so. I did exhort them regularly to be sure to get outside and away from their screens when not in class as well. That said, in the campus-wide course evaluation questionnaire conducted by our Institutional Research Officer, a student expressed the following sentiment about the Zoom classes: “Whenever I have to look at the long texts, my eyes, neck and back hurt.” (Yasuda 2020). In spring and summer 2020 I fought sedentism on my own time as well, and since it had become permissible to do so online, finally earned yoga teacher training licenses, registering these with Yoga Alliance and obtaining Japanese yoga teacher insurance.

**V.3**

Fall semester 2020 began in face-to-face classroom format during a lull in local COVID-19 cases. This meant students were supposed to wear masks (several had become complacent or resistant and needed reminders on proper mask wearing over the nose). Self-report data indicated that student sedentism had increased not only in spring semester (as I had suspected) but persisted even during the summer break. The combination of increased sedentism, warm weather and mask wearing made even the slight exertion of radio exercise seem unwise, so I began teaching chair yoga. I also taught them a cooling pranayama breath exercise in October, and a warming pranayama when it got colder. During summer break, I already had prepared a video of chair yoga postures in CEFR B1 level English (Occhi 2020), incorporating the body part vocabulary I had been teaching in previous semesters. We used other videos, and I taught live as well. These routines were well received generally, though many students who had gained weight with the even greater sedentism of COVID-19-affected life had problems with doing some of the seated lower body postures in jeans that had become tight. I encouraged them to wear or bring sweatpants, but this advice was not followed. I also offered simple English mindfulness videos on that same YouTube channel, but the background noise of ocean waves was too soporific for some students and thus was not used extensively. However, incorporating yoga afforded more variations in meditation scripts and discussion of yoga as an eight-limbed practice, with the cultural details about those for the Anthropology focus of the course. I aimed to take students beyond the current stereotype of yoga as simply another exercise women do in bras and leggings (which was the situation witnessed in Japan during the fieldwork of

McCartney, 2019). With that in mind, we occasionally practiced a video of Accessible Yoga showing people of various mobilities (Doughterty 2020), as well as a CEFR B1-adapted version I made and read aloud of Mirabai Bush's "Just Like Me" lovingkindness meditation script (see Appendix):

The face-to-face classroom situation of Fall 2020, in which reported COVID-19 cases were not high in Miyazaki, was stressful for me since many students had become sloppy or even resistant towards enforced mask wearing. One reason I included the accessible yoga video and meditation with drastic statements such as "This person will die, just like me" was that I felt it was increasingly important to foster compassion. After all, there were also students in the class who expressed to me that they had germ phobia, or fears that they may infect older relatives in the home.

As the weather cooled, the necessity of having the windows open encouraged us to do the radio exercises as well. Student enthusiasm for the more active military versions, as well as the Greater Singapore Workout, seemed greater than in previous semesters. After the winter break, we had an uptick in COVID-19 cases in Miyazaki and finished the semester online, maintaining the routines. This recent iteration will be revised before the course is offered again, likely in fall 2021. Overall, the reaction was positive, as measured by the incorporation of the topic as a no-wrong-answer writing prompt on the final exam in February 2021. Students reported various physical and mental benefits such as increased bodily warmth, flexibility, relaxation, and enjoyment. Several comments indicated that students were making efforts to be more mobile on their own time. Here are a few, verbatim:

> when I do RT and yoga, it was hard at first, but the more I did, I felt that my body became more flexibel, and the muscles that had been tight were released and the pain that I feel in daliy life disappeared. When I did meditation, my mind cleared and I could fouce on the class.

> There were many chances to do workout, meditation, and yoga in our every class. I am greatful taking this course becasue I do not really do such things by myself. Especially, it was precious time for me in this COVID-19 situation. I think this is no only my case, becasue the demand for workout and yoga are increasing in this tough time. The

> most memorable one is the Singapore workout. It told me two important things. Firstly, it convyed me the enjoyment of doing workout. Secondly, I could study Singapore culture through this workout. For example, the name of movements comes from Singapore's chracteristics such as kias chope. Therefore, I can say that experiencing those exercise is valuable things for studying Anthropology.
>
> In this class, I experienced some exercises such as yoga and radio exercise. First, I will show my experience of yoga. Yoga always makes me relaxed, and I do not think about anything unnecessary during yoga. Additionally, yoga warms my blood, because I breathe properly. Next, I will introduce my experience of radio exercise. I experienced some exercises, like Jieitai exercise or Singapore exercise. I could enjoyed doing them, because they have rhythmical music. After expanding COVID-19, I rarely do exercise by myself, so they were good exercise, and I could keep healthy thanks to them. After finishing this semester, I want to continue these exercises by myself, and I will do that with my family.
>
> I learned a lot about yoga. Yoga has many benefits. First of all, yoga makes our body healthy. Deborah said she would do yoga every morning. So I'm convinced why she's always fine. Yoga is also good for your mental health. You can calm down and relax. However, yoga has a long history and is very difficult to study.

In the Fall semester 2020 round of the Institutional Research office's all-campus survey, 18% of students reported that online courses had negative effects on physical and mental health (Yasuda 2021b). Three teachers reported eye problems (particularly while forced to work from campus), and specific comments included: “Sitting behind the computer for long periods of time caused some health problems for me”; “Personally I had physical problems such as neck strain, eye strain and headaches”; and “Students often said that their eyes hurt and their heads hurt” (Yasuda 2021a). These surveys had different questions for students and teachers and also varied between semesters, but it is worth noting that these were the kinds of physical problems that may be alleviated by taking brief exercise, such as radio taisō or chair yoga, and meditation breaks (with the eyes closed or covered with hands) as we did in class. It remains to be seen whether we will teach online again; however, the problems experienced in online education are not dissimilar to those of everyday office workers, so the need for mitigation of the physical effects of sedentism and screen use will remain for the teachers, and for many students reemerge in their working lives.

This is an ongoing project, both as a classroom practice and as a research project. In lieu of a conclusion, here is a summary of the current exercise and meditation scheme at the time of writing. Students are told in the ANT3111 syllabus and at the first meeting that exercises and meditation are part of the participation grade and that they should dress appropriately. Students also study their own exercise levels and postural habits as autoethnography, and complete a questionnaire about stress levels. With as much English support as is appropriate, we then do a variety of exercises at the beginning of each class, depending on the weather and situation. These include Japanese radio taisō of various types, other countries' similar exercises (e.g., Singapore in various versions, Taiwan, and China), yoga, and meditation.

Positive outcomes are available from observation and self-study. Student performance improves: sleepiness decreases, and willingness to participate increases. Students self-reported during class and in writing that their condition improved, and even that they incorporated exercise in their daily lives outside school after realizing its importance to their performance. Students who participated reported a greater sense of physical ease and self-awareness, as well as increased cultural knowledge about yoga and the various exercises. PDCA is in progress; I will create more simple English yoga and meditation videos, and make whatever other adjustments student evaluations suggest. Overall the unit has been successful with positive student feedback. Stating at the outset that these elements are required in the course creates a self-selection effect that no doubt underlies positive outcomes as well. Comments that indicate room for improvement will be considered for PDCA. Overall schoolwide student and teacher evaluations for the 2020 school year indicated that Zoom classes increased eye fatigue, stiff neck/shoulders, and back pain (Yasuda 2020, 2021a, b). It is not possible to know what ergonomic factors were involved for each individual, but these are problems that could be mitigated by the measures adopted and described here. Yoga is currently ubiquitous in Japanese popular media, and has become part of the Ministry of Health, Labor, and Welfare's definition of fitness (e-herusunetto, n.d.) along with the claim that the original static poses, breathing exercises, and meditation (i.e., three of the eight limbs set forth by Patanjali in the Yoga Sutras as asana, pranayama, and dhyana) have entered Japan via Zen (Sawada, 2020). It is indeed part of current practice at some temples to offer yoga classes (McCartney, 2019). Application of this research is suitable for any teacher or student who feels the impact of physical stress in their daily life and is willing to make some small effort to mitigate it (though I urge any prospective yoga teacher to get proper certification and insurance). As this project continues I hope to widen its reach so that students outside this specific class can have the opportunity to understand the importance of exercise and meditation in counteracting the physical stress of contemporary daily life. I do not think, however, that making exercise mandatory is a feasible proposition. Lifelong education courses would be another possible venue to expand this project and serve a wider population.

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Appendix

"Just Like Me" Lovingkindness meditation script

Begin by being aware that there is a person in front of you, either in your mind or actually sitting across from you.
A fellow human being just like you.
Silently repeat the following phrases while thinking about this person.
This person has a body and a mind, just like me.
This person has feelings, thoughts, and emotions, just like me.
This person has, during his or her life, experienced physical and emotional pain and suffering, just like me.
This person has at some point been sad, just like me.
This person has been disappointed in life, just like me.
This person has sometimes been angry, just like me.
This person has been hurt by others, just like me.
This person has felt bad or sad at times, just like me.
This person worries, just like me.
This person is frightened sometimes, just like me.
This person will die, just like me.
This person has longed for friendship, just like me.
This person is learning about life, just like me.
This person wants to be caring and kind to others, just like me.

This person wants to be content with what life has given, just like me.
This person wishes to be free from pain and suffering, just like me.
This person wishes to be happy, just like me.
This person wishes to be safe, strong, and healthy, just like me.
This person wishes to be loved, just like me.
Now, allow some wishes for well-being.
I wish that you have the strength, resources, and social support to navigate the difficulties in your life with ease.
I wish that you'll be free from pain and suffering.
I wish that you'll be peaceful and happy.
I wish that you'll be loved because you are a fellow human being, just like me.
Whether this person is right there with you, or you have brought this person into your mind, thank this person for doing this practice with you.
Give thanks in whatever way feels appropriate.
Thank you for doing this practice (adapted from Bush, 2018).

# 宮崎市における災害時の在住外国人支援：多文化共生に向けた取り組みと課題 [Building effective measures for disaster prevention and response for foreign residents in Miyazaki City]

## 安富　淳[1] YASUTOMI Atsushi

**Abstract**

This article discusses measures for protecting foreign residents during disaster prevention and response in Japan. In particular, it sheds light on Miyazaki City's (Miyazaki-shi's) crisis management policy. Currently, approximately 7,000 foreigners reside in Miyazaki Prefecture, of which about 2,000 live in Miyazaki-shi. With these figures on the rise, the city administration urgently needs to establish effective measures to safeguard Miyazaki-shi's foreign residents against threats of large-scale natural disasters such as typhoons, floods, and tsunamis. The article examines efforts by various other communities in Japan to develop such effective measures, including enhanced multi-language assistance, greater sensitivity to minimize cultural misunderstanding, and building more integrated information networks to better ensure emergency alarms are received by foreign residents. The author argues that the Miyazaki-shi administration has much to learn from their examples and lessons.

## はじめに

本稿[2]では、地震、大雨、洪水、台風などの大規模自然災害時に、多文化共生の理念に基づいた上で、いかに地域の在住外国人に対する支援をすべきか、との問いをもとに、宮崎市の支援政策を考察する。

宮崎県内には、2020 年の時点でおよそ 7 千人の外国人が居住し[3]、そのうち、宮崎市内には、約 2 千人が居住している[4]。宮崎市内の在住外国人の出身国の割合は、ベトナム（32%）、中国（21%）でおよそ半数を占め、その他、韓国、ネパール、フィリピン、インドネシアの順となっている[5]。また、在留資格別には、技能実習生（1 号、2 号の合計）（33%）および留学生（28%）で 6 割を上回

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[1] 宮崎国際大学国際教養学部准教授。
[2] 本研究は、令和 2 年度宮崎市地域貢献学術研究助成金に基づいて行った。本稿は、同助成研究成果の一部として報告したものであり、担当課の承諾を得て本誌に掲載した。
[3] 宮崎県ホームページ、「令和元年度「宮崎県の国際化の現状」、https://www.pref.miyazaki.lg.jp/allmiyazaki/kanko/koryu/page00366.html （アクセス日、2021 年 1 月 1 日)。
[4] 宮崎市議会事務局総務課による統計、2020 年 3 月。
[5] 宮崎市議会事務局総務課。

り、その他、永住者（26%）、　特別永住者（6%）、家族滞在者（6%）の順となっている[6]。

宮崎市内では、在住外国人を対象とした防災活動はすでに各地で実施されている。例えば、宮崎県国際交流協会は、近隣県の国際交流協会との共同で、災害時の外国人サポートボランティアのための養成講座を開催している[7]。また、宮崎市消防局は、在住外国人を対象に災害を体験する防災セミナーを開催し、この会で宮崎大学に通う留学生 56 名が参加し、起震車体験や防災アプリの使い方、防災グッズの取り扱いなどを学ぶ体験を提供している[8]。こうした活動は、在住外国人の防災意識を高め、市内の支援体制を強化する貴重な機会である。2020 年 9 月に宮崎県を襲った「台風 10 号」では、椎葉村で外国人技能実習生として勤務するベトナム人 1 名が死亡、1 名が行方不明となり、在住外国人への災害支援の関心がさらに高まった[9]。

## 1 災害時の外国人支援と多文化共生

大規模災害時において地域の在住外国人をどのように支援すべきか、という問いは、神戸淡路大震災（1995 年）を機に、研究者、実務者、ボランティアや NGO 等、様々な視点から、活発に議論されてきた。その後、東日本大震災（2011 年）や熊本地震（2016 年）など大規模自然災害での経験や反省を踏まえ、具体的で実践的な視点から研究や政策提言が行われてきた。

そのなかで、「コミュニティ防災」という概念で、地域の役割が重要視されるようになる。2005 年 1 月に兵庫で開催された「国連防災世界会議」で採択された「兵庫行動枠組」で、この「コミュニティ防災」が取り上げられ、防災は政府のトップダウンによる支援にとどまらず、近隣地域社会の共助をめざしてコミュニティの災害対応能力の向上を図ろうとするものである。これと同時に、外国人住民もまた生活者であり地域住民であるとの認識のもと、地方自治体による多文化共生政策のあり方も課題となる。総務省は、2006 年 3 月に「多文化共生の推進に関する研究会報告書」では、地方自治体が取り組むべき分野として「コミュニケーション支援」「生活支援」および「多文化共生の地域づくり」の 3 つの柱をとして対策が論じられ、防災についても、重要な支援分野の一つとして位置づけられた[10]。2015 年 3 月に仙台市で開催された「第 3 回国連防災世界会議」では、2030 年までの防災指針として、「2015 年仙台行動枠組」が採

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6 宮崎市議会事務局総務課。

7 宮崎県国際交流協会、「外国人災害サポートボランティア養成講座および外国人のための防災講座」、2019 年 2 月。

8 宮崎大学、「在住外国人に対する防災セミナーに宮崎大学留学生が参加」（2019 年 11 月 11 日）https://www.miyazaki-u.ac.jp/newsrelease/international-info/post-384.html　（アクセス日 2021 年 1 月 1 日）。

9 例えば、「技能実習生＝災害弱者　台風１０号、土砂崩れで犠牲　不十分な法定講習／対応、受け入れ先任せ　宮崎・椎葉」『毎日新聞』、2020 年 10 月 22 日西部夕刊。

10 総務省、『多文化共生の推進に関する研究会報告書～地域における多文化共生の推進に向けて～』、2006 年 3 月。

択され、在住外国人を含む多様な市民が主体とする防災および減災に向けた目標が掲げられた。

吉富は、阪神淡路震災および東日本大震災の地域における外国人支援の事例を検証し、コミュニティ防災の強化のためには、言語、制度、心理的な壁を乗り超える支援をしつつも、最終的には在住外国人も対等に社会参画できる状況を作ることが重要であると指摘する[11]。多言語支援のあり方、自治体や NGO といった支援機関間連携のありかたなど、多様な視点から、外国人支援に対する具体的な政策提言が発信されているが、これらが目指す目的は、吉富の結論に帰結する。

宮崎における支援のあり方に関する先行研究では、例えば、髙柳は、宮崎県内の災害時の外国人支援の課題として、多言語情報提供および災害情報提供を挙げ、拡充させるための県市町村等の組織内調整やそれを促進させるための国際交流協会が果たしうるコーディネーターの役割の必要性を指摘している[12]。

## 2. 本稿の焦点

市内の在住外国人支援政策で、とくに大きな課題になるのは、市内で勤務する技能実習生の災害支援のあり方である。技能実習生は、数年間の短期間で各企業や工場等で勤務する。その多くは日本語を解さず、同じ出身国同士のグループで生活することが多い。日本人コミュニティとの交流も極めて限定的である。日常生活に関する手続きや勤務や生活に関する問題解決は、雇用する企業や技能実習生を派遣する監理団体が本人に代わって行うことが多い。しかも、このような支援の程度や質は団体によって異なる[13]。このため、自治体にとっても、普段の技能実習生個々人の顔が見えづらいだけでなく、災害時の情報伝達や安否確認が確実にできるのか、未知数である。現状では、雇用企業に一任している状況であり、放置するのは非常に危険である[14]。

また、災害情報や支援情報の拡散のための有効な手段として SNS の活用が論じられるが、SNS は災害支援に万能ではなく、人的ネットワークは依然として災害支援の基盤となる手段である。このため、市内に在住するベトナム人、フィリピン人、中国人など、それぞれのコミュニティにおける情報交換や日本人

[11] 吉富志津代、『グローバル社会のコミュニティ防災―多文化共生のさきに』、大阪大学出版会、2013 年 3 月、13 頁。

[12] 髙柳香代、「県域での災害時における情報提供体制づくり」『多文化共生政策の実施者に求められる役割』、多文化共生政策の実施者に求められる役割 ： 多文化社会コーディネーターの必要性とあり方 ： 多文化社会コーディネーター研究会、2012 年度報告、東京外国語大学多言語・多文化教育研究センター、2013 年 11 月。

[13] 筆者によるインタビュー、外国人技能実習生を派遣する監理組合の元職員、2020 年 12 月 12 日。

[14] 「技能実習生＝災害弱者　台風１０号、土砂崩れで犠牲　不十分な法定講習／対応、受け入れ先任せ　宮崎・椎葉」『毎日新聞』、2020 年 10 月 22 日西部夕刊。

との交流、地域コミュニティとの交流を深め、地域の支援ネットワークを構築することが重要となる。

本稿では、宮崎市がこれらの課題の解決に向けて支援政策を具体的に形成していく上で、他市の事例や経験から学ぶべき点はなにかを明らかにする。

## 3. 災害支援における多言語支援

発災時や避難所では多言語支援が常に問題

災害時の在住外国人への支援における最大の課題のひとつは言語の壁である。災害支援における多言語支援の重要性は、阪神淡路大震災以来、指摘され、様々な取り組みが全国で行われている。

防災対策の分野においては、在住外国人に向けた多言語情報を自治体のホームページやパンフレットなどで、災害時の情報収集方法や、避難所の位置、非常時持ち出し袋の用意の呼び掛け、日本語での防災用語の解説など、基本情報を提供している。こうした取り組みは、宮崎県でもすでに充実されつつある。例えば、公益財団法人宮崎県国際交流協会では、防災に対する日頃の備えや避難する際の注意事項などを「防災パンフレット」として日本語、英語、中国語、韓国語で配布され、ホームページからもダウンロードできる [15]。同交流協会が宮崎県に業務委託された「みやざき外国人サポートセンター」が 2019 年 10 月に開設され、防災を含む外国人が宮崎県で暮らす上での多言語サポートを提供している [16]。

他方、発災時や避難所における情報が日本語のみになりがちで、多言語支援が不十分で在住外国人が理解できなくなる事例は少なくないことから、避難所での多言語支援が喫緊の課題となる。

熊本市国際交流振興事業団による調査は、熊本地震（2016 年 4 月 16 日）で被災し避難した外国人が避難中の最も不安に感じたことは、テレビニュースや避難所での災害情報がほとんど日本語で状況把握できなかったことだと報告している [17]。また、同地震で被災した英国人留学生は、避難の際の情報や避難所に貼り出された支援情報もすべて日本語のみだったので、どのように行動してよいかわからなかったと回顧している [18]。熊本で被災したバングラデシュ人留

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[15] 公益財団法人宮崎県国際交流協会、「外国人住民のための防災パンフレット」 https://www.mif.or.jp/disaster-prevention-pamphlet/ （アクセス日、2021 年 1 月 1 日）。

[16] 宮崎県、宮崎県ホームページ「みやざき外国人サポートセンターを開設します！」 https://www.pref.miyazaki.lg.jp/allmiyazaki/kanko/koryu/20191021100712.html （アクセス日 2021 年 1 月 1 日）。

[17] 一般財団法人熊本市国際交流振興事業団、「2016 熊本地震外国人被災者支援活動報告書（第二版）：多文化共生社会のあり方～発災から半年、動き出したこと～」、2017 年 1 月、8 頁。

[18] 熊本県民テレビ、「シリーズ 地震から 1 年 外国人が経験した“JISHIN”」、2017 年 6 月 14 日。YouTube で視聴可能 https://www.youtube.com/watch?v=EPBCzJutw5c （アクセス日 2021 年 1 月 1 日）。なお、

学生も、混乱の中ようやく避難所にたどり着いた末、そこでの情報すべてが日本語で理解できず、孤独感と困惑で不安になったと証言している [19]。熊本地震でのこれらの証言は、避難所における多言語支援の必要性が指摘されて久しい現在に至っても、対策が遅れていることを示唆している。

興味深いのは、日本語能力が比較的高い在住外国人でも、類似の問題を抱えることもある点だ。日本語能力試験の中上級保持者であっても、テレビやラジオ、インターネットで発信される日本語の情報は難解ですぐには理解できないので、日本語での情報収集は諦めてしまうと述べる外国人もいる [20]。また、日本語の日常会話や基本的な読み書きが可能であっても、緊急地震速報やスマホアプリの警報は日本語のみの場合が多く、その際は、理解するまでに何度も聞き直したり、読めない漢字を調べたりして現状把握に長時間を要する [21]。小松市国際交流協会の日本語講師で、災害時外国人支援に従事する職員は、どんなに日本語能力が高度であっても、また、いかに日本語表現をやさしくしても、被災時にパニックになっている時は、母語しか受け入れず、母語でしか確かな情報が頭に入ってこない事例は多々あるため、多言語支援は不可欠である、と説明する [22]。

災害時における自動翻訳アプリ使用の利点とリスク

通訳機器や翻訳アプリの利用には、その利便性とリスクに鑑み、使用を検討すべきである。近年は、人工知能（AI）を使用した翻訳アプリは、無料で容易に使用できるようになった。避難所など、災害時の在住外国人に対する支援で、翻訳アプリは、通訳者の人員不足の課題を解決するためには有効な手段になりうる。インターネット接続とスマートフォンさえあれば、だれでも無料で利用できるため、予算上の問題が生じない利点がある。

VoiceTra（ボイストラ）は、インターネット経由で、実際に音声を聞き取って翻訳、発声するスマートフォンのアプリで、総務省も観光の他災害時での外国人支援に有効であるとして推奨している。また、「Safety tips」は、外国人旅行者向けに、官公庁が開発した防災情報提供アプリで、英語や中国語を含めた多言語で緊急地震警報等の通知発信のほか、避難の際のコミュニケーションカードが用意されている。

実際に VoiceTra を知っていたため、緊急時に救急隊に病状を伝えることができて一命をとりとめた経験を有する在住外国人は、病状を利用関係者に的確に伝えられたという事実と同時に、自分の危機的状況と心理状態が相手に伝わ

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ここで出演したミッチェル氏は、2019 年 2 月に宮崎県国際交流協会主催の「外国人支援のための防災講座」においても、講演をおこなっている。

[19] 「被災外国人の悩みに対応：行政用語・手続き『言葉の壁』」『朝日新聞』、2016 年 6 月 7 日。

[20] 筆者によるインタビュー（2020 年 12 月 12 日）。

[21] 筆者によるインタビュー（2020 年 12 月 12 日）。

[22] 筆者によるインタビュー（2020 年 12 月 11 日）。

った安堵感を感じたと述べ、翻訳アプリの孤独や不安を低減するという心理的な有効性も強調する[23]。

同時に課題もある。第一に、アプリの認知度の問題だ。総務省や自治体の防災パンフレットなどで、上記のアプリの紹介とダウンロードの推奨をおこなってはいるもものの、一般に知名度が高いとは言い難い。アプリの存在自体を、まず日本人住民も含め、周知する努力が必要だ。

第二の課題として、災害用のアプリでは対応しきれない、個別の情報の翻訳にはアプリでは限界がある。一般に普及しているGoogle Translateのような翻訳アプリを利用することは可能であるが、他方で誤訳によるリスクも存在する。小松市の在住外国人支援に従事する職員は、インターネットを介しての翻訳アプリは、行政用語を用いた会話や文書には、いまだに誤訳が多いため使用できるレベルにはないと説明している。過去に外国人からの問い合わせに対応できる通訳者が手配できず、翻訳アプリを使用した結果、本来回答すべき内容と異なった回答を伝達してしまったという事案を猛省したという[24]。このため、同職員は、生命に影響する災害時にするには危険で、安易に機械翻訳に依存するわけにはいかないと主張する[25]。

第三の課題は、避難所におけるインターネット使用可能範囲である。在住外国人のなかには、スマートフォンは持っていても、勤務地や宿舎でのwifiは使用できても、SIMカードを挿入しておらず、電話機能やwifi圏外でのインターネット使用ができない人も多い。避難所での無料wifi設置も難しいことが多い。現時点ではこうしたアプリの使用には制約が多いことも留意しておく必要がある（後述）。インターネットを介さず使用できる翻訳機の購入の可能性も検討すべきだが、予算の課題や、実際に購入しても、どこに何機配備するか、などの運営に関する取り決めも必要となる。

日本語教室は在住外国人の避難所・避難ネットワークともなりうる

在住外国人のための日本語教室は、日本語を学ぶ機会の提供の他、災害時の避難所あるいは災害支援の有効なネットワークの場となるため、重要な機能を果たしうることを認識すべきである。

県内では、宮崎県国際交流協会が主催あるいは支援する県内の日本語教室や日本語練習会で、在住外国人に対する日本語の災害関連語の普及と防災意識の促進が図られている[26]。これに加えて、防災ネットワークや避難所としての潜

[23] 筆者によるインタビュー（2020年12月12日）。
[24] 筆者によるインタビュー（2020年12月11日）。
[25] 筆者によるインタビュー（2020年12月11日）。
[26] 県内で実施されている日本語教室は、1）宮崎県国際交流協会が主催する「日本語講座」、2）地域のボランティアによる「日本語練習会」、3）同国際交流協会が支援する「地域日本語教室」の他、4）私立の日本語専門学校や外国人を対象とした個人の日本語教室やボランティア教室などがある。

在的な役割に注目すべきである。日本語教室は、交流協会独自の建物や公民館などの公的施設を会場として、語学以外にもイベントも行われることが多々あり、こうしたことが在住外国人の交流の場となり、人的ネットワークが形成される。こういった場所は、大規模災害時には、在住外国人にとっての避難所や心の拠り所、あるいは、とりあえず情報を収集する重要な場所としてセーフティネット機能を果たすことになる。

実際に、東日本大震災時に在住外国人の支援を行った宮城県国際化協会や仙台国際交流協会によると、宮城県内にある 20 を超える日本語教室は、その地域に暮らす外国人にとって日本語学習の場以外に、重要な交流の場として、極めて重要な機能を果たしたと回顧している [27]。東日本大震災時には、在住外国人の安否確認には、自治体の機能が逼迫しているなか、日本語教室が安否確認やその後支援に大きな役割を果たしている。宮城県気仙沼市内の「岩沼日本語教室」では、普段からの在住外国人との交流があったため、「○○さんは、△△に避難しているが、元気で怪我もしていない」などのように、在住外国人の個々人の安否確認や健康状態などの把握も比較的容易にできたことが確認されている。また、日本語教室は、避難時やその後の復興時においても、在外外国人が抱える問題や不安の悩み相談をしたり、集まって料理をつくって談話したり、地域の日本人が食料などを持ってきてくれた際に会話する場となったりするケースがみられ、心理的サポートやケアが非公式な形で行われた形となった [28]。

小松市国際交流協会で日本語教室を運営する職員も、日本語教室（同協会が設置されている建物内）は、語学を学ぶ場所という位置づけのみならず、大規模災害時には在住外国人の避難場所と自ずとなるだろう、と説明する [29]。地域の在住外国人であれば、同教室の存在も場所も受講者でなくとも誰でも知っているし、受講者同士が顔なじみであるので、情報交換も容易だ。日本語講師は、外国人の扱いに慣れており、外国人が理解できる日本語を話し、また、日本語を学ぶ外国人の話す日本語にも慣れている。こうしたことから、同職員は、在住外国人にとって、日本語教室は、災害や支援に関して気軽に相談も質問もできる「とりあえず避難して、安心できる場所」となるだろうと分析する [30]。また、在住外国人が自ら、こうした場所に一箇所に集合した方が支援をする側にとっても効率的でもある。

[27] 第 4 章「3.11 基礎自治体による外国人住民安否確認と生活復興支援気仙沼市からの報告」、J. F. モリス、公益財団法人宮城県国際化協会、公益財団法人仙台国際交流協会（共著）、『東日本大震災からの学び 」― 大震災時、件・政令市の地域国際化協会の協同と補完を再考する』、2015 年 1 月。
[28] J. F. モリス、公益財団法人宮城県国際化協会、公益財団法人仙台国際交流協会（共著）、第 4 章「3.11 基礎自治体による外国人住民安否確認と生活復興支援気仙沼市からの報告」『東日本大震災からの学び 」― 大震災時、件・政令市の地域国際化協会の協同と補完を再考する』、2015 年 1 月。
[29] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。
[30] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。

このように、地域の日本語教室は、在住外国人にとって、大規模災害時の有効なセーフティネットとしての機能を果たす。東日本大震災時の宮城県における外国人支援を分析したモリス氏は、外国人被災者の安否確認や支援に日本語教室が最も役立ったと振り返る [31]。在住外国人を支援した仙台市国際化協会や仙台国際交流協会は、日本語教室は普段からの受講者・地域・講師のつながりが支えとなり、防災や支援に関する情報が増加するため主体的な問題解決をおこなうことができた点を重要視している [32]。

宮崎市において、現時点では在住外国人に対する日本語教室の数は限定的ではあるが、今後、外国人の増加に伴い、日本語教室の数も増加する可能性も考えられる。宮崎市では、今後、日本語教室の実態を把握し、平時からの情報交流を維持することによって、大規模災害時の在住外国人の安否確認や被災状況の把握が容易になると考えられる。このため、長期的な視点に立って、宮崎市は、平時において、日本語教室や国際交流場所の把握や在住外国人の受講状況を把握することによって、大規模災害時の安否確認に大きな役割を果たすことを認識し、そのためにも、平時に、日本語教室や日本語講師との普段からの交流をとおして、ネットワークを構築しておくことが重要である。

各避難所に災害時多言語表示シートや指差しボードを平時に配備

災害時の多言語支援は、人材資源や、翻訳・通訳のコストや要する時間を多く費やす。とくに地域の小規模避難所への通訳の配備は非現実的である。多文化共生マネージャー全国協議会の時氏も、刻々と変わる災害状況を逐次多言語で翻訳することは現実的に限界があることを認識した上で、他の支援方法も同時に考慮すべきであると説明する [33]。

より実践的で簡易な手段として挙げられるのが、多言語表示シートや指差しボードの導入である。多言語表示シートやピクトグラム（「トイレ」や「受付」といった場所や方向などをイラストで説明する技術）であり、各自治体ですでに実践されている。一般財団法人自治体国際化協会（クレア）のホームページでは、避難所で使用できる「災害時多言語表示シート」や「多言語指差しボード」がすでにデフォルトで作成されており無料でダウンロード・印刷して使用できるようになっている [34]。

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[31] J. F. モリス、公益財団法人宮城県国際化協会、公益財団法人仙台国際交流協会（共著）、『東日本大震災からの学び 」― 大震災時、件・政令市の地域国際化協会の協同と補完を再考する』、2015 年 1 月、50 頁。

[32] 第 4 章「3.11 基礎自治体による外国人住民安否確認と生活復興支援気仙沼市からの報告」、J. F. モリス、公益財団法人宮城県国際化協会、公益財団法人仙台国際交流協会（共著）、『東日本大震災からの学び 」― 大震災時、件・政令市の地域国際化協会の協同と補完を再考する』、2015 年 1 月。

[33] 時 光、「災害時の外国人住民支援に関する今までの取組と今後の課題」『留学交流』2013 年 3 月号、Vol. 24。

[34] 一般財団法人自治体国際化協会（クレア）ホームページ、http://dis.clair.or.jp/ （アクセス日 2021 年 1 月 1 日）。

これらのツールは、予算的にも安価で導入が可能であることから、導入が急がれる具体策であるが、課題は、導入のタイミングと配備準備にある。こうしたツールは、発災してから、避難所に外国人がいることに気づいて必要に応じて作成するのでは、無論対応が遅れてしまう。平時から、「避難所」「トイレ」「救護所」「一人一つずつお取りください」などの基本的に常時必要と考えられるような多言語の貼り紙は、日本語と共に多言語で予め印刷しておき、各避難所に備え置くなどの工夫は有効であろう。宮崎市内であれば、最も使用されると思われる言語は、英語の他、中国語、ベトナム語、韓国語などであるから、日本語と併記でこれらのシートを予め作成したものを、市内 225 箇所の指定避難所に配備しておく、といった準備は有効であると考えられる。

「やさしい日本語」を住民レベルで普及

「やさしい日本語」は、災害時における「多言語対応のひとつ」と捉えられており、通訳者不足の解消や誤訳によるトラブルが減るという利点が大きい。災害のみならず、観光、行政、ニュースなど多岐分野における外国人に対する情報発信に使用が普及しつつある。全国の市町村のホームページの多くはすでに「やさしい日本語」での表記が充実しつつあり、防災情報も掲載しているところも少なくない。宮崎県内では、例えば都城市ホームページには、「やさしい日本語」専用のページで、行政や生活情報を提供している[35]。

「やさしい日本語」とは、外国人にも平易に表現する方法で、1995 年の阪神淡路大震災で被災した外国人が日本語や英語が理解できず支援に必要な情報が十分に受け取れなかった反省から、社会言語学者や NHK による協働で研究が始まった[36]。

「やさしい日本語」は、災害時情報伝達に非常に有効な手段であるが、「やさしい日本語」を「こどもに話す言葉」と混同されることもあり、こうした誤解を回避するうえでも、日本語を母語とする話者は、十分にその仕組みを理解し、専門家による訓練が必要である。一般的に、一文を短くする、文末表現を簡素にする、やさしい語彙を用いたり、漢語動詞（例：避難）よりも和語動詞（例：にげる）に言い換えたりすることで難易度が下がる効果はあるが、内容が正確に伝わらない危険性もある[37]。例えば、災害時の「やさしい日本語」を研究する植木は、「避難路を確保してください」を「ドアを開けてください」と平易に言い換えたつもりでも、「後続する避難者の通行を容易にするように」

[35] 都城市ホームページ、https://www.city.miyakonojo.miyazaki.jp/site/easy/ （アクセス日、2021 年１月１日)。
[36] 庵功雄、『やさしい日本語 ： 多文化共生社会へ』、岩波書店、2016 年、36 頁。
[37] 植木正裕、「外国人への災害時情報伝達における『わかりやすさ』とその問題点」、2006 年言語処理学会第１２会年次大会。

という目的が消滅してしまい、危険回避の行動が実現せず、具体的な目的の補足をする必要があると指摘している[38]。

宮崎県内では、すでにこうした取り組みが始まっている。宮崎県からの委託で宮崎県国際交流協会が「入門・やさしい日本語」という教科書をベースに、やさしい日本語の普及のための準備を実施している[39]。在住外国人に対する災害支援をおこなう日本語話者、とくに行政関係課担当者や、消防、自衛隊、ボランティアといった支援者への理解促進活動や、一般の日本人住民に対しても、認知度を高め、「やさしい日本語」の普及と訓練を促進する必要がある。

## 4. 避難所における文化的問題

宗教上制約のある食事提供については具体策が必要

多文化共生の観点からの在住外国人に対する災害時支援に関して、課題として挙げられる点に、イスラム教徒に対する食事の提供がある。イスラム教徒は一般に豚肉などイスラム法において非合法とされたものは食することができないため、避難所での食事の提供に際しても、このような宗教上の背景をもつ在住外国人に対する配慮が必要とする。現在では、「ハラル」「ハラルフード」といった語彙が一般にも普及してきた結果、「炊き出しにハラル食の用意が重要」との意識が向上しているものの、具体的な支援対策を講じる必要がある。

熊本市の事例は極めて有効である。熊本地震で被災したイスラム教徒の外国人が、宗教上の理由から避難所での食事ができないことをインターネットで知った外国人支援団体からハラルの弁当やジャムなどが届けられるようになると同時に、現地の外国人支援団体「コムスタカ〜外国人と共に生きる会」が、イスラム教徒が食べられる温かい食事の炊き出しをおこなった[40]。また、市内のリッチモンドホテルからは、ハラル食の弁当も届けられている[41]。

宮崎市地域防災計画（令和 2 年）によると、宮崎市は、災害時における救援物資協定を市内のスーパーや食料関連企業等と提携しており[42]、災害時に無償の配布や配達などを提携している。ハラル認定食品についても類似の協定締結を長期的に検討することは有効であろう。他方で、ハラル認定の食品（専門機関による基準がクリアされたと証明された食品）を、各自治体が炊き出しとして即時に用意するのは容易ではない。レストランや食品業者との連携が実現す

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[38] 植木。

[39] 筆者によるインタビュー、宮崎県国際交流協会、2020 年 9 月 24 日。吉開章、『入門・やさしい日本語 外国人と日本語で話そう』、アスク出版、2020 年 7 月。

[40] 一般財団法人熊本市国際交流振興事業団、8 頁。

[41] 八木浩光、「熊本地震での外国人被災者支援活動を振り返って」『自治体国際化フォーラム』、2017 年 7 月、Vol. 332、6 頁。

[42] 宮崎市防災会議、「宮崎市地域防災計画：その他の防災対策編 令和 2 年 6 月」、2020 年 6 月。

るには時間を要するし、技術的な面で協力できる団体や企業が常に存在するとも限らない。より実践的な取り組みは、イスラム教に限らず宗教やアレルギー、その他食事制限のある住民に対して、平時に対応できる食料を常に備蓄し、自助対策の強化を周知することであろう。また、自治体がハラル認定の非常食を備蓄しておくことも効果的だ。予算的な課題は残るが、専門店からハラル認証付きのご飯やお粥、パン、レトルトカレー、ラーメン等を揃えることは可能である[43]。

在住外国人と地元住民との摩擦

避難所では、災害の混乱と緊張と自由の制限のある環境下でさまざまな人が集まる。多文化共生に基づく外国人支援において、避難所は文化的問題が起こりうる場所でもある。過去の事例から学ぶべき点として以下の 2 件を挙げる。

第一は、避難所における炊き出しでのトラブルである。石川県の某所で避難所に避難したベトナム人技能実習生が、炊き出しで提供されたおにぎりを一人で多数持っていってしまい、他の住民が受け取れなくなった、というケースがあった。当人に事情を聞くと、一人で占有する悪意はなく、次回の提供の保証がないし、友人やその家族にも分けるためだったと説明した。日本では通常、定刻に数度の提供があることを知っているから、各自が必要な分のみを受け取るという不文律が浸透している。このため、両者に誤解が生じることになる。石川県国際交流協会の職員は、この件では、炊き出しの仕組みを伝えるべきであったと同時に、日本人は外国人のこうした背景や考え方も理解することが重要だと述べる。留意すべき点として、「ひとり（ひと家族）につき 1 つに限り各自が並んで受け取る」というこの慣習の無理解から生じる同問題は、避難所で頻発する文化的摩擦の典型例になっているようである[44]。熊本で被災したミャンマー人留学生も避難所での問題として同様の証言をしている[45]。また、外国人が仲間のためにひとりで複数受け取り持っていったところを、日本人住民に非難された後に暴力を振るわれたというケースも報告されている[46]。

第二は、モリスの著書『東日本大震災からの学び』で紹介された宮城県気仙沼市の避難所における外国人と地元住民との軋轢の事例である[47]。モリスによると、東日本震災直後に、気仙沼市の中国人技能実習生のグループと避難所の

[43] たとえば、セブン・リザーブド社では、ハラル認証の防災備蓄食事セットが販売されている。https://www.7reserved.com/?pid=135702441、（アクセス日、2021 年 1 月 1 日）。

[44] 例えば、田村太郎、「災害時における外国人への対応～支援の対象だけではなく、担い手としての外国人への視点を」『自治体国際化フォーラム、2017 年 7 月、vol. 332、2 頁。

[45] 一般財団法人自治体国際化協会（クレア）の多文化共生のビデオでの証言。http://dis.clair.or.jp/（アクセス日、2021 年 1 月 1 日）。

[46] 外国人が仲間のためにひとりで複数受け取り持っていったところを、日本人住民に避難された後に暴力を振るわれたケースも報告されている。総務省国際室、「多文化共生の推進に関する研究会、多文化共生の推進と防災 ～これまでの取り組みと今後の展望～」、令和元年 11 月 1 日～令和 2 年 8 月。

[47] モリス、48 頁。

中で周囲にいた地元住民との間に摩擦が生じ、この事態を重くみた雇用企業が、別の避難所へ移動させたというケースがあった。その後、移動先の避難所で、この実習生たちは、周囲にいた日本人は支援物資が不足していて困っていることに気づき、人数分以上配布されて余った支援物資を自主的に配ることにした。この結果、日本人に非常に感謝されたという。モリスは、このエピソードからわかることは、避難所において外国人の集団が地元日本人にとって「迷惑集団」として摩擦を生じさせる原因ともなりうるし、同時に「融和」の要因にもなるということだと説明している[48]。

上記 2 例の問題に関わらず、日本人・在住外国人相互による誤解は無用なさらなる摩擦を生むことに繋がるため、外国人・日本人双方で理解し合う努力が欠かせない。在住外国人に対しては、日本の慣習を丁寧に伝えるといった努力は必須であるし、先入観、固定観念、差別意識をなくす努力も当然である。これ以上に重要なのは、在住外国人を、特別扱い、とくに「お客様」「おもてなし」といった概念と混同してしまう誤解もさらなる摩擦を生む原因となる点だ。この点は、様々な外国人支援団体が共通して指摘するものである。例えば、「広がれボランティアの輪」連絡会議や特定非営利活動法人「多文化共生マネージャー全国協議会」も、外国人を「お客様」として特別扱いしないことが大切で、コミュニティの一員としてできることを積極的に手伝ってもらうことに注意を払い、支援者としての貴重な資産として同等に扱うことの重要性を指摘する[49]。

## 5. 災害情報提供の課題

スマートフォンアプリおよび SNS を使った情報伝達

スマートフォンは、全国的に普及しており、総務省の 2018 年度の調査によると、全世代の約 8 割がスマートフォンを所有している[50]。スマートフォンを通した災害対応は、すでに緊急地震警報やゲリラ豪雨の接近などを知らせるアプリなど、すでに広く活用されている。

上述したように、スマートフォンアプリ「Safety tips」は、様々な言語の翻訳ソフトが内蔵されているほか、緊急災害情報の発信、避難所位置、付近の病院情報、救援時の支援などの災害時に便利な機能が多言語（2020 年 8 月時点で 14 ヶ国語）で用意されている。この他、「Japan Official Travel App」は外国人観光客向けに作成された観光支援アプリで、災害情報などを多言語で発信

[48] モリス、48 頁。
[49] 「広がれボランティアの輪」連絡会議、「災害時における在留外国人支援の視点」、2019 年 6 月。時光、「災害時の外国人住民支援に関する今までの取組みと今後の課題」『留学交流』、2013 年 3 月号、Vol. 24。
[50] 総務省、『通信情報白書　令和元年』、2019 年。

している。気象庁の公式ホームページも、全国の警報などを多言語で発信している。

また、LINE やフェイスブックなどの SNS を使用した防災情報の発信も、すでに全国の自治体の多くで利用されている。内閣官房情報通信総合戦略室によれば、2019 年度の調査において、災害情報の発信に SNS を使用している自治体は、全国 1,741 団体のうち、1,145 で、2014 年に実施された同調査時（672 自治体）の 2 倍に拡大しており、年々増加している[51]。このうち、人口 10 万人以上の地方公共団体の 90%以上が災害対応に SNS を活用している[52]。また、同調査では、SNS のうち、最も使用されているのはフェイスブック（918）で、Twitter（696)、LINE（185）の順となっており、LINE を使用した災害の情報発信を行っている自治体数は比較的少ない[53]。SNS は、登録すれば、容易に情報が瞬時に配信され、転送もスマートフォン上で即時にできるので、在住外国人を対象に多言語で災害情報を配信することで、安否確認や時々刻々と変化する災害状況の変化にも対応した発信が可能となる。内閣官房でも、SNS の利用は、すぐにコストをかけずに開始できる利点を活かし、容易に情報発信ができるために、在住外国人への支援も有効であるとして、導入および運用のためのガイドブックを作成し普及を推進している[54]。

他方で、SNS やアプリを使用する災害時支援には注意が必要である。

第一の課題は、通信の問題である。災害時のインターネットの活用は不可欠なツールとなっているが、実際に、発災時や避難時にインターネット接続が在住外国人を含む住民が使用できるのか検証が必要である。

技術的には、すでに、総務省が災害時の wifi 環境整備を整備している。総務省は、2018 年に「防災等に資する wifi 環境の整備計画」を策定し、2021 年までに、全国の避難所、避難場所に指定された学校や市民センター等を含む 3 万の防災拠点に回線拠点の設置を目指している[55]。実際に、2016 年の熊本地震、2018 年 7 月の豪雨（「令和 2 年 7 月豪雨」)、2020 年 9 月の「台風 10 号」等で、運用された[56]。他方で、災害時に無料開放される、「無線 LAN ビジネス推進連絡会災害統一 SSID 00000JAPAN（ファイブゼロジャパン)」の認知度は高いとは言い難い。無料公開される気象条件、使用可能な場所、接続の仕方や、無料で使

[51] 内閣官房情報通信技術総合戦略室、「平成 29 年 11 月 災害対応における SNS 活用に関する自治体 web 調査」

[52] 杉山正平、「地方公共団体の災害対応における SNS 活用」『通信ソサエティマガジン』、2020 年春号、No. 52、291 頁。

[53] 内閣官房情報通信技術総合戦略室、「平成 29 年 11 月 災害対応における SNS 活用に関する自治体 web 調査」

[54] 内閣官房情報通信技術総合戦略室、「災害対応における SNS 活用ガイドブック」、2017 年 3 月。

[55] 総務省によると、2020 年の時点で、すでに 2 万 6 千箇所の拠点がすでに設置されている。総務省、「防災等に資するＷｉ－Ｆｉ環境の整備計画」、2020 年 2 月。

[56] 総務省、『通信情報白書　令和元年』、2019 年。

用するための方法[57]、無料公開の期間などの情報は、多くの住民が周知している状況にはない。「ファイブゼロジャパン」の普及にあたり、2013 年に試験運用に参加した宮城県釜石市職員は、同サービスの有効性を評価しつつも、大規模災害時に、市民への情報連絡網が途絶えた状況下で、無料 wifi の使用法を周知するのは困難なので、平時からの周知が重要であると指摘している[58]。日本人住民間での認知度が高くない中、在住外国人に同サービスを周知するのはさらに困難である。

宮崎市に被害をもたらした 2020 年 9 月の「台風 10 号」の際に、宮崎市青島の避難所に一晩滞在した日本人住民（宮崎市青島在住）は、避難所にて同サービスは稼働していなかったと証言している[59]。同氏は、「2020 年 9 月 6 日午前 10 時に、宮崎市は市全域に警戒レベル 4 の避難勧告を発令したが、同サービスは、避難勧告発令と同時に、自動的に作動するわけでも、どの避難所でも使用できるわけでもないようだ、また、当時の単なる機械的な不具合があったのかもしれない。いずれにせよ、このサービスが、どのように機能するのか把握していない」、と述べており、同サービスに関する周知（および実際の運用）の不足を明示している[60]。

また、スマートフォンを所有している在住外国人は多いが、技能実習生の多くは、経費の制約から、スマートフォンに SIM カードを挿入していない場合が多く、技能実習生がインターネットに接続したスマートフォンアプリを使用できるのは、職場や宿舎、あるいはコンビニなどの公共無料 wifi サービスが提供されている場所に限定される[61]。したがって、wifi が使用できない環境では、アプリや SNS のサービスは使用できず、大規模災害時に刻々と変化する災害状況や避難所状況などの情報提供機能が十分に生かされないリスクを認識する必要がある。

第 2 の課題は、SNS を活用した災害情報発信を効果的に使用するためには、在外外国人の SNS 使用状況を正しく理解する必要があることだ。

まず、在住外国人が使用する SNS アプリの種類の使用頻度は、母語や出身国によって異なっている。日本ではプライベートメッセージには、LINE が普及しているが[62]、在住外国人が最も利用する SNS は異なる。愛知県の在住外国人を

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[57] 国内のドコモ、au、ソフトバンクの各社が接続を開放するものであり、実際には無料で使用するための登録などの条件はない。

[58] 大内良久、「大規模震災時における公衆無線 LAN 無料開放の実証実験」『新都市』、2014 年 1 月号、47 頁。

[59] 筆者によるインタビュー、2020 年 12 月 17 日。

[60] 筆者によるインタビュー、2020 年 12 月 17 日。

[61] 現時点で、これを確証付ける統計は存在しないが、実際に技能実習生の支援に従事している職員（複数）は、このように証言する。筆者によるインタビュー、小林市社会教育課、2020 年 9 月 22 日、小松市市民共創部、2020 年 12 月 11 日、小松市観光文化課、2020 年 12 月 11 日、石川県国際交流協会、2020 年 12 月 12 日。

[62] NTT ドコモ・モバイル社会研究所が 2020 年 1 月に実施した調査によれば、代表的な SNS である LINE、Twitter、Facebook、Instagram、TikTok のうち、LINE の使用率は、10 代から 80 代の世代で 72.6%であ

支援する NGO「TABO ネット」が愛知県内に在住する外国人 1,000 人を対象にした調査では、母語や出身国によって、最も使用する SNS が異なる（たとえば中国語が母語の外国人は、WeChat、ベトナム語やネパール語話者はフェイスブックを最も使用している）が、フェイスブックと LINE は最も使用されていることから、災害情報は、フェイスブックと LINE を組み合わせて発信するのが最も効果的であると提言している [63]。また、小松市の在住外国人を支援する職員も、同様に、韓国人は主に KakaoTalk、ブラジル人は WhatsApp、中国人は WeChat を頻繁に使用している様子なので、防災情報の効果的な発信方法を考える必要があると指摘している [64]。さらに、上記 NGO「TABO ネット」は、上記の調査を検証した結果として、地方自治体の多くは、Twitter を頻用して政府広報や災害情報発信をおこなっている反面、在住外国人は、地域の情報収集として使用している割合は極めて低く、防災情報発信に対する効果は低いだろうと分析している [65]。

さらに、日本国内では LINE が最も普及していることに鑑みて、LINE を活用した災害情報発信が多くの自治体で行われているが、在住外国人の LINE の利用者も含め、受信するためには「友だち登録」を行う必要がある。したがって、課題として、とくに LINE を特に使用していない外国人に対して、LINE のインストールおよび登録を促す必要がある。

この問題を解消するための小松市国際交流協会の取り組みは興味深い。LINE は（他のアプリと同様）、ダウンロード・インストールし、さらに友だち登録をすることが前提であるため、同協会は、防災イベントの際に、「LINE をインストールし、同協会の防災 LINE アカウントを友だち登録すると懐中電灯がもらえる」というキャンペーンを会場で行ったところ、多数が登録してくれたという。ここで、プレゼントの懐中電灯とともに、日本語教室案内や防災情報、国際交流イベントなどの案内書も共に同封して配布することによって、さらに同協会とのネットワーク構築につながるような工夫をした。また、同イベントに集まることで、さらに外国人同士や日本人との交流が深まることになる [66]。さらに、LINE で防災情報を受信した在住外国人には、LINE メッセージに、LINE を登録していない人やスマートフォンやインターネットが使用できない人がいるかもしれないので、口頭や電話でもあらゆる手段でとにかく伝言するように喚起しているという [67]。

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った（有効回答数= 6,925）。https://www.moba-ken.jp/project/others/sns_index.html、（アクセス日、2021 年 1 月 1 日）。

[63] 多文化防災ネットワーク愛知・名古屋（TABO ネット）、「外国人 SNS 利用状況調査報告～愛知の外国人 1000 人に聞きました」、2018 年 9 月。

[64] 筆者によるインタビュー、小松市市民共創部、2020 年 12 月 11 日、小松市観光文化課、2020 年 12 月 11 日。

[65] 多文化防災ネットワーク愛知・名古屋（TABO ネット）。「FB と LINE の組み合わせ効果的：外国人への SNS 情報発信」『中日新聞』、2018 年 12 月 8 日。

[66] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。

[67] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。

ここから、宮崎市が学ぶことは多い。

第一に、自治体が独自に発信する災害情報の伝達手段の再考である。宮崎市は、外国人のための防災情報として、ホームページでの外部リンクの紹介、多言語による防災パンフレットの配布、防災メールの発信（日本語のみ）、Twitter での発信などを行っているが、他市の例で見られるような在住外国人のニーズに合致した SNS による伝達は行われていない。市内での局所的な災害情報や避難の呼び掛けを、多言語で LINE やフェイスブックなどで可能にするアカウントがあれば有効だ。詳細な情報を瞬時に多国語で作成するのは困難だとしても、定型句を平時に作成し、必要事項を状況に応じて入れ込むようなデフォルトを作成し、配信することによって、迅速に対応できる。宮崎市で使用している防災メールを多言語化することも有効ではあるが、登録するには、空メールを所定のアドレスに送付し、案内に沿って認証、登録といった煩雑な操作を要し、特に在住外国人にはハードルが高い。また、メールというメディアの効果についても再検討が必要である。ここで、20 代の在住外国人の証言は注目に値する。彼らは、共通して、「メールは、若い世代にとって、長文であるうえ、返信に使用する語彙に気を遣わなければならないため、返信したがらないし、魅力のない面倒な存在だ」と強調する[68]。

第 2 に、既存の外国人 SNS ネットワークとの協力関係の構築である。宮崎市内に在住するベトナム人は独自のフェイスブックのページで活発な情報交換を行っており、市内のベトナム人のほぼ全員がなんらかの機会に同ページを利用している[69]。普段は日常生活に関する文化情報や個人間の売買情報といったやりとりが多いが、災害時には有効な情報手段となった。2020 年 9 月の台風 10 号では、市役所やニュースからの注意や避難情報を、ベトナム語・日本語を解す個人が翻訳したり、Google 翻訳機能を使用したりするなどして、情報を掲載していた。また、被害となった 2 名のベトナム人技能実習生の家族への支援なども呼び掛けた[70]。同様に、宮崎市に在住する中国人は、WeChat を使用したネットワークがあり、普段は生活情報の交換に使用しているが、災害情報を日本語から訳したものを掲載したり、領事館からの連絡事項を転送したりしているという[71]。宮崎市としては、このような外国人 SNS ネットワークを使用する個人との人的交流を構築した上で、災害時に掲載を依頼できるような仕組みや、自治体からの情報をフォローしてもらう体制を整えることは可能である。

[68] 筆者によるインタビュー、宮崎市、2020 年 11 月 17 日、2020 年 11 月 18 日。
[69] 筆者によるインタビュー、宮崎市、2020 年 11 月 18 日。
[70] 筆者によるインタビュー、宮崎市、2020 年 11 月 18 日。
[71] 筆者によるインタビュー、宮崎市、2020 年 11 月 13 日。

防災無線および広報車両巡回は逆効果

防災無線（市町村防災行政無線）は、停電時にも音声によって情報発信ができることから、大規模災害時の情報発信に有効な手段のひとつではあるが、在住外国人を対象とした利用には再検討が必要である。

岐阜県美濃加茂市は、ブラジル人が多く居住する地域である。2011 年 9 月の豪雨の際に、防災無線と広報車両の巡回により、日本語と同時にポルトガル語で注意を喚起した。この支援に従事した地域政策課の職員は、外国語によるアナウンスは、刻々と変化する状況に応じた情報を外国語翻訳する時間に余裕がなく、また、日本語独特の「〜する模様、〜する見込み」などの曖昧な表現を直訳するのは困難だったと述べている。さらに、同職員は、後方車両の巡回場所についての地理情報がなかったことから、推測で車両巡回を行ったと説明し、その効果については懐疑的だったことを示唆している [72]。

小松市での指摘も注目に値する。小松市はブラジル人が多く住むすむ地域において、台風が接近した際に、防災無線を使用してポルトガル語で注意を呼び掛けたことがあったが、むしろ逆効果だったと、小松市市民共創部の職員は説明する [73]。同職員によると、外国語の無線放送について、日本人の住民が理解できない外国語が頻繁に放送されてくるのを気味悪がり、疎ましく思い、防災無線の電源を切ってしまったケースがあった。さらに、「先程の外国語の放送は何だったのか」といった確認の問い合わせがブラジル人、日本人コミュニティー双方から殺到し、職員の対応業務を増加させ、住民を却って混乱させる結果になってしまった [74]。

宮崎市の在住外国人も、2020 年 9 月「台風 10 号」で使用された広報車両巡回の効果について、以下のように、疑義を呈する。

> *後方車両がサイレンを流しながら、何度も呼び掛けていたが、（遠くから聞こえてくるため音声の質が悪いため）日本語が聞き取れず、外国語での放送もなかったので内容を理解できなかった。さらに、災害の危険度がわからなかった。単なる注意喚起なのか、即時避難を勧告するほどの差し迫った状況を知らせているのか、まったく判断できず、不安だけが増した。* [75]

このように、防災無線や広報車両巡回による防災情報発信は、在住外国人に対する支援対策としては、技術的課題が多いばかりでなく、かえって本来の効果を失わせてしまう危険性がある。このため、防災無線や車両巡回における多言語支援に人材および資金の投資をする有効性は見いだせないため、SNS による情報拡散など、他の分野での多言語支援の強化を行う方が良策と考えられる。

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[72] 事業構想大学院大学、「災害時の外国人支援：全国自治体が取り組む災害時の外国人対応（岐阜、静岡、岡山、群馬)」、https://www.projectdesign.jp/200002/foreign-support/002964.php、(アクセス日、2021 年 1 月 1 日)。
[73] 筆者によるインタビュー、小松市市民共創部、2020 年 12 月 11 日。
[74] 筆者によるインタビュー、小松市市民共創部、2020 年 12 月 11 日。
[75] 筆者によるインタビュー、宮崎市、2020 年 11 月 17 日、2020 年 11 月 18 日。

## 6. 外国人防災士の育成

外国人防災士の育成は、宮崎市による今後の災害時外国人支援の強化にとって、有益な分野として検討の価値がある。

まず防災士とは、防災を「自助・共助・協働」の実現に必要な専門的な知識や技能を身につけ日本防災士機構から認証資格を付された人物のことを指し、2020 年 12 月の時点で、全国に 20 万人以上、宮崎県には 5,380 人が登録されている [76]。「外国人防災士」という資格は存在せず、防災士の資格を有する在住外国人を意味する便宜上の造語である。したがって、外国人防災士は、一般の防災士と資格要件は同じであり、まず、日本防災士機構が開催する「防災士養成研修講座」を受講の上、履修証明書を取得し、「防災士資格取得試験」に合格することが必要である。さらに、自治体等が主催する「救急救命講座」を受講し履修証明を取得しなければならない。このように、在住外国人であっても、高度な日本語力を有するばかりでなく、防災や緊急救命等の高度な知識と技能の習得、また、防災士としての適正な資質が求められる。

外国人防災士の役割は、地域における在住外国人に対する災害時の支援に極めて有効な手段である。外国人防災士は、在住外国人の居住するコミュニティや住宅を訪問し、防災指導をしたり、外国語による防災訓練や防災意識向上のためのイベントの実施、外国人の視点であるからこそ見えてくる特有の問題点や質問に応じたり、大規模災害時の避難や情報伝達に外国語で対応するといったことが可能となる。外国人防災士は、単なる言語サポートや防災知識の伝達としての機能のみではなく、日本人コミュニティ住民と在住外国人との交流の橋渡しや、異文化の相互理解の相互理解、在住外国人の心理的な安心感の提供など、副次的な効果が期待できる。

外国人防災士育成への支援で参考となるのは、小松市国際交流協会の取り組みである。同協会は、小松市消防署からの支援を受けながら、協会の支援事業の一環として 2016 年に開始し、日本語講師が中心となって、防災士教本に沿った試験対策や専門用語の説明の座学支援のみならず、受験者が在住する町内会に受験時の経済的負担（受験料や試験地までの交通費など）を依頼するなどの支援も実施した。この結果、初年の 2016 年に 6 名（ブラジル 4 名、ウルグアイ 1 名、中国 1 名）が合格し、2021 年には 3 名が受験する予定である [77]。このような外国人防災士は、市消防署との協働により、防災訓練や防災キャンプを実施し、在住外国人に対して参加を促し、けが人を乗せた担架を運ぶ競争や、消

[76] 認定特定非営利活動法人日本防災士機構ホームページ、https://bousaisi.jp/aboutus/ （アクセス日、2021 年 1 月 1 日）。
[77] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。

火器を使った消火ゲームなどの運動会形式の防火訓練や、避難所で電気を一切使用しない避難体験などを企画・運営している[78]。

さらに、同市では、こうした外国人防災士を中心として、市消防本部が独自に認定した「しみん救護員」とともに、独自の地域の外国人支援グループ「多文化防災チーム」を作成し、防災時に地域の在住外国人が孤立しないための活動を行っている。こうした経験から、外国人防災士の働きかけによって、これまで日本語表記しかなかった避難所で記入する個人情報カードを外国語で併記することになった[79]。

## おわりに

本稿は、災害時の在住外国人の支援のあり方を、他市の事例を検証しつつ、宮崎市が学ぶべき点について明らかにしてきた。

本研究は、令和 2 年度宮崎市地域貢献研究助成のもと実施されたものであり、本稿は 2 年間の研究期間のうち、1 年次時点での中間報告という位置づけで論じたものである。第 2 年次研究では、特に次の 3 点についてさらに明らかにしたい。

第 1 に、技能実習生に対する具体的な支援体制構築の検討である。先にみたように、市内に在住する技能実習生は、各勤務地の宿舎などに集団で生活していることが多く、日本人との交流も極めて限定的である。災害時の支援は、企業や派遣監理団体に一任されている状態である。技能実習生を対象にした防災および発災時の対策には、このような雇用企業や監理団体との協力関係と具体的な支援体制の構築が不可欠となる。

第 2 に、在住外国人支援に携わる関係機関間の連携のあり方を検証する必要がある。冒頭で述べた高柳論文が指摘するように自治体の関係各課と県・市の国際交流協会の連携強化は必須である。また、自治体、自衛隊、消防の他、企業や NGO 団体などの多様な支援機関との連携や協力関係の構築は、ますます必要となる。地域内の防災士、外国人サポートボランティア、語学サポーター登録制度、外国人防災講座、などの活動といった草の根の外国人支援活動を、活性化させ連携させるための有効策も必要だ。さらに、このようなネットワークにはリーダーシップの存在が欠かせない。地域リーダーとなりうる在住歴の長い外国人や、町内で多文化共生に理解や関心の高い協力者の「人材発掘」を行い、地域の人的交流を深化させるための具体策が求められる。

第 3 点目は、SNS による災害情報発信の普及に向けた具体策の研究である。上記でみたように、宮崎市では、SNS による多言語情報発信体制の構築という

[78] 筆者によるインタビュー、小松市国際交流協会、2020 年 12 月 11 日。
[79] 「防災：外国人孤立させない － 小松に多文化チーム」『北陸中日新聞 Web』、https://www.chunichi.co.jp/article/4336 （アクセス日、2021 年 1 月 1 日）。

技術面と、アプリダウンロードや登録を在住外国人に普及させるというソフト面での両課題に同時に取り組む必要がある。上記の例でみたように、イベント開催時での「アプリのダウンロード・ともだち登録」キャンペーンのような取り組みや、技能実習生を対象にした職場や宿舎への出張講座なども一案だろう。

第 2 年次研究では、このような点を中心に、具体的かつ実現可能な支援策について考察していきたい。

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# Avatars in the Classroom: Promoting Understanding of the Active Learning Process Through Gamification

**Jason Adachi**


## Abstract

This paper describes a long-term CLIL class project that reinforces awareness of study behaviors that may influence the understanding and retention of course concepts and vocabulary. The project turns the learning process into a game in which student teams curate the knowledge accumulated by their team's avatar, an imaginary student that is participating in the class alongside them.

Using a simplified version of cognitive psychology's model of short and long-term memory, the teams shuffle bits of information into different categories of their avatar's body of acquired knowledge. Some of this information is transient and subject to removal. More firmly internalized material is shifted to long-term memory and becomes safe from mishap. Over the course of gameplay, specific actions, events, and random occurrences help or hinder the learning process and serve as tangible examples of how various factors affect retention.

In the gamification of the learning process, the project seeks to take advantage of the human impulse to be a "backseat driver." By "teaching" the avatar and making critical judgments about what must be done to help the avatar to succeed, students gain insight into their own learning processes.


## Introduction

Games in language learning are certainly not new and there is robust interest in gamification and game-based learning as ways to make education more intrinsically motivating. Gamification involves adding game elements such as badges to target content, while game-based learning involves integrating target content with game mechanics (Findlay, 2016). Both seek to increase engagement by increasing the entertainment value of otherwise mundane tasks.

The Avatar Project was a class game-based learning project that incorporated aspects of both gamification and GBL. It was initially developed and run in the freshman CLIL Introduction to Literature course at Miyazaki International College in Spring 2017. With the invaluable support and advice of Dr. Katherine Bishop, the content professor in this course, this long-term project ran for a period of almost 2 months and has since undergone considerable evaluation and revision over the years since its initial development. This paper will explain the rationale, activity framework, and pedagogy underlying the project as it was conceived, and also outline variations that make the parts of the larger project useful in shorter time frames.

**Project Objective**

The primary objective of the Avatar Project is to reinforce students' awareness of study behaviors that may influence their understanding and retention of course concepts and vocabulary. The term "avatar" in the project's name is a reference to the computer term that describes the image or figure that a person may choose as their online representation.

In this project, students create an avatar to be a virtual student whom they guide through the learning process. Participant students work together to "pilot" their avatar through modified versions of the same lessons that they are themselves experiencing in class (e.g. literature content). To do this, students must understand the class material well enough to decide what their avatar will need to learn. The avatar's learning can be affected by random game events as well as actions that the human students choose for their avatar. Will the avatar form a study group, or go to a movie with friends? Will the avatar try to cram for the next quiz, or spend short amounts of time studying daily?

The success or failure of the team is measured by applying the avatar's accumulated body of knowledge to an assessment task, such as a quiz, prepared by the instructor or project manager. In other words, it is not the human students who must answer the quiz. Rather, the avatar must "know" enough to pass without any additional information provided by the students once the quiz has begun.

In short, the project turns the learning process into a game in which student teams teach their avatar what is important, and help them to maintain that body of knowledge in preparation for an evaluation.

Simply packing as much information as possible into the avatar's memory would be effective, but hardly realistic. Therefore, as a major game mechanic, the project uses the co-opted terms "short-term memory" (STM) and "long-term memory" (LTM). Atkinson and Shiffrin's (1968) multi-store memory model describes short-term memory as lasting up to 30 seconds and long-term memory as anywhere from minutes to years. Within the project, teams shuffle bits of information into the different categories of their avatar's body of acquired knowledge. Some of the information is short-term: transient and subject to removal. For the purposes of gameplay, this vulnerable information is said to be in short-term memory. More firmly internalized material is stored in long-term memory and is safe from mishap. Over the course of play, specific actions, events, and random occurrences help or hinder the learning process, shift information around, and serve as tangible examples of how various factors affect retention.

Putting project participants into the position of "backseat driver" offers several advantages. Foremost among these is the benefit of learning by teaching. In making critical decisions about what their avatar needs to know in order to do well on the assessment task, students come to understand what they themselves need to know. Furthermore, shifting assessment from the student to the avatar allows project participants to explore the effects of a range of activities that may be either positive or negative without suffering real-world consequences. This makes it possible for avatars to fail spectacularly and thereby create object lessons of what *not* to do for the team's members.

**The Avatar Project Overview**

The initial incarnation of the Avatar Project incorporated a number of factors to make the experience more nuanced. Creating a scenario in which study is valued to the exclusion of all else is unrealistic and pre-determines in-game choices about appropriate behavior. With this in mind, avatars scored points in 3 ways. First was the STM/LTM system in the category of Knowledge. The second was a category of Fun/Health (F). The last was a category called Life/World (L).

Within each category, teams rolled on a table of random events that awarded points for that category. Events in the Knowledge category included "Review Notes +1STM," and "Study Session +5 STM." Events in the category of Fun/Health were determined by the avatar team when the avatar was first created and could include entries like "Learn to Cook +2F," or "Hiking +1F." Similarly, entries in the Life/World category could include "Neighborhood Cleaning +1L," or "Coach Soccer Team +2L."

However, some of the items on the event list were negative. A long vacation could cause the avatar to lose all accumulated STM, a broken arm could reduce

Fun/Health points, and getting into an argument with someone might cause a similar reduction in Life/World points.

Every day, teams would roll once for each category and 3 more times in any category of their choosing. They would then record the resulting events in their avatar's journal. The 3 free rolls in any category were important because they provided a means for students to prioritize the category of their choosing.

When STM was accumulated, teams were instructed to write something important from class on a notecard, one card per STM gained. The note cards were kept in an envelope designated for STM and which represented everything in the avatar's current short-term memory. When events dictated that something be lost from STM, cards were drawn from the envelope at random and put into a "Forgotten" envelope. Forgotten items could be restored to STM when new STM points were earned.

Once each day (and also when dictated by the Knowledge category on the random table of events) one STM card could be chosen for conversion into LTM. The information on the STM card was either copied or taped into an LTM record and was no longer subject to loss due to events.

Project teams were also encouraged to keep a separate notebook for their avatars. They were allowed to put anything they wanted into the notebooks. The notebooks were useful for keeping track of what information should eventually go into STM when points became available, and were also available for use during open-book quizzes.

At the end of the project, avatars were evaluated with questions that could only be answered if the necessary information was in current STM, or LTM. Simply accumulating points in the Knowledge category was not enough to ensure success. The teams needed to be selective about what information went into STM/LTM since available space was limited. It is worth noting that while this system identified an academic "winner," it also recognized the value of fun, health, and life experience.

It may help to understand the flow of the game by examining a greatly simplified version that focuses on vocabulary review within a 30-minute timeframe.

**Avatar Project: Quick Game Rules**

In this short version, the game is more interesting if set up competitively. Pairs of students manage a single avatar and compete with one or two other avatars seated at the same table. The content focus is on vocabulary review.

Terms

- STM = short-term memory (may be forgotten/flipped)
- LTM = long-term memory (always remain face up)
- Add* = draw STM cards from the vocabulary pile (or restore forgotten cards)
- Forget = flip STM card over (flipped cards do not count for points unless they are restored)
- Restore = flip a forgotten card right side up

Set Up

- Each player/team designates a space for STM and LTM cards in their area. (An avatar sheet with space marked for each type of card can help to avoid confusion later.)
- Each player/team receives a sheet with the Avatar Actions Table and the Challenge Table.

*Table 1.* Avatar Action Table (Quick Game)

**Avatar Actions Table**

| 2d6 | Description | Effect |
|---|---|---|
| 2 | Long vacation | Forget 5 STM |
| 3 | Other priorities | Forget 3 STM |
| 4 | Skip a class | Skip one turn |
| 5 | Ignore homework | Forget 2 STM |
| 6 | Zone out in class | Forget 1 STM |
| 7 | Daily homework | Add 1 STM |
| 8 | Review before class | Add 2 STM |
| 9 | Vocabulary building | Add 3 STM |
| 10 | Study Session | ALL players add 2 STM |
| 11 | Reorganize notes | Add 3 STM & move 1 STM to LTM |
| 12 | Epiphany! | Move 3 STM to LTM |

*Table 2.* Challenge Table (Vocabulary)

| Challenge Table (OC=opponent's choice) | | Vocab |
|---|---|---|
| Card # | Description | STM Reward |
| A | Give the definition for a word (OC) | 1 |
| 2 | Mime & guess a word (OC - team guess) | 2 |
| 3 | Spell a word (OC) | 1 |
| 4 | Sketch & guess a word (OC - team guess) | 2 |
| 5 | Provide a synonym or antonym for a word (OC) | 1 |
| 6 | Correcctly guess the word based on a definition (OC) | 2 |
| 7 | Divide a word into syllables (OC) | 1 |
| 8 | Give another form (n, v, adj, etc.) of a word (OC) | 2 |
| 9 | Provide a synonym or antonym for a word (OC) | 1 |
| 10 | Correctly use a word in a meaningful sentence (OC) | 2 |

- Each player/team gets one set of vocabulary memory cards (either prepared by the instructor or written by the students at the instructor's direction). Shuffle and place face down in the center of the play area.
- Each player/team gets 2 6-sided dice (2d6).
- Shuffle and place Challenge cards (numbered 1-10) face down in the center of the play area.
- Each table receives a master vocabulary list of words and definitions.
- A player/team is chosen to go first and play proceeds clockwise around the table.

<u>Actions Taken on Player/Team's Turn</u>

1. Player/team rolls 2d6, checks the Avatar Actions Table, and applies any effects.
    1. Study Session – All player/teams add* rewards as indicated.
    2. Skip a class – The player/team's turn ends immediately. (Skip to 4 below.) Play resumes normally with no further penalty.
2. Player/team draws a Challenge Card and fulfills the action described. The opposing team selects challenge words when appropriate (OC = opponent's choice). Guessing tasks are fulfilled by teammates. Reward cards need not match the words chosen in an OC challenge. Guessing tasks may be disregarded and a new card drawn if players are not teamed. If the Challenge is fulfilled successfully, player/team adds* rewards as indicated. Note: If Challenge Cards are drawn from the top of a shuffled pile, all of the challenges will be issued,

albeit in a random order. For truly random challenges, use a spinner, 10-sided die, or simply shuffle the cards before pulling a card.

3. After all other actions are completed, player/team transfers 1 STM to LTM.
4. Dice are passed to the next player/team.
5. Play continues until a number of turns or a specified amount of time has passed.

** Note: whenever cards are drawn from the stack, draw one extra card. Choose one card to return the bottom of the stack and add the remainder to STM. This does not apply to forgotten words that are selected for restoration to active status.*

<u>Winning the Quick Game</u>

At the conclusion of play, the teacher conducts a "quiz" on the material from the vocabulary memory cards. (More open-ended games may be played with blank, write-in memory cards. If this is the case, the scope of the material should be announced beforehand.) Avatars score points when their avatar has words in STM or LTM that match material on the quiz.

**Discussion**

The basic game mechanics of the project lend themselves extremely well to variation. More time, less time, broad content coverage, narrow focus, cooperative work, and competitive formats can all be accommodated fairly easily. The goal of raising and reinforcing awareness of beneficial study behaviors can be addressed with a fair amount of subtlety by adjusting the rewards and penalties applied in the Avatar Actions Table. Actions that the instructor deems to be most desirable can be assigned more beneficial rewards, while those that are seen as harmful can be assigned appropriately disastrous penalties. Targeting specific behaviors and referring to them by name will help to reinforce them as students play.

This process of deciding what to reward, what to penalize, and the relative values of each pushes the instructor to make thoughtful decisions about what is really important. Game design can be a delicate undertaking, and as McGonigal (2011) points out, it requires looking at the world from a somewhat different perspective. Game designers must balance effort and reward, advancement and failure, and always consider the maximization of engagement.

Since the project's avatar is a virtual construct, novelty can be increased by mixing in fanciful elements if the instructor feels that doing so will increase engagement for a given group of participants. For example, extraordinary events might have an effect on LTM causing the avatar to lose information that should otherwise be "safe." Perhaps the avatar is struck by lightning or abducted by aliens resulting in some form of selective amnesia as an extraordinary event? The point of introducing elements like these would be to increase the entertainment value of the game.

With additional time and energy, it would be possible to expand the avatar's portfolio of knowledge and skills beyond a single course or discipline. The avatars could then compete with one another in academic challenges or other skills that they would need to balance against their STM/LTM development. What if the STM gains for a given period had to be divided between two or more areas of study? Additional elements like these increase the learning curve, but have the potential to greatly increase entertainment value for the right group of project participants.

Entertainment value should never be underestimated as a motivator. In his book, *Wonderland*, Steven Johnson points out that "you will find the future wherever people are having the most fun" (2016, p. 13). He means that innovation is often inspired by the quest for entertainment. There is little reason to think that his conclusion is unfounded and a lot of reason to believe that combining education with entertainment can have a profound impact on society at large.

The notion that a project like the one described in this paper might be converted into a computer-based educational tool is a provocative one. Large portions of modern society today participate in social discourse through a computer screen. Goldberg (2011) points out that videogames represent a huge commercial force that outstrips movies, music, and DVD sales in the digital marketplace. Games are compelling, and immersive virtual experiences provide some of the richest and most intoxicating examples of this. If we could bring even a small portion of that interest to the realm of classroom education, the results would be profound.

Although the project described here is not a videogame, the two do share some benefits. Increased engagement, critical evaluation of the relative value of course content, and a greater awareness: those behaviors that are most valuable for achieving academic or personal goals.

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# On the cross-linguistic word order in noun phrases: Evidence from Japanese and Mandarin

## Paul Richards

**Abstract.** This article critically evaluates Cinque's (2005) "role-up" operation by comparing possible word orders in Japanese and Mandarin noun phrases. The analysis finds differences in the distribution and semantics of Mandarin and Japanese adjectives and relative clauses (RCs) that challenge Cinque's famous account of cross-linguistic variation in noun phrase word order.

### 1. Introduction

Cinque (2005) derives the cross-linguistic word ordering within noun phrases through a universal order of merge and language specific movement operations. Cinque describes this movement as a "roll-up" and argues that it is motivated by a nominal feature that drives movement of a nominal up through the nominal projection. The roll-up is successful at deriving the attested word orders of Greenberg (1963) and excluding unattested word orders. One issue that Cinque notes, however, relates to the relative ordering of adjective and number. Cinque observes that several languages (Korean, Mongolian, and Quechua) exhibit the word order Dem < Adj < Num < N, which cannot be derived via the proposed roll-up. Cinque proposes that, as these languages are verb final and have prenominal RCs, the pre-*numeral* adjectives in these languages may actually be reduced relative clauses (RRCs). Cinque, thus, proposes the following word ordering for these languages:

1. Dem < Adj from RRC < Num < Adj < N.

Example (1) above shows two possible sources of adjectives within the noun phrase, both above and below Num. Cinque (2005) suggests that a similar analysis may be extendable to Mandarin, which is reported to have pre-demonstrative adjectives. The pre-demonstrative adjective is also not derivable through the roll-up operation, and Cinque suggests that this word order may also be derivable if the adjectives that precede demonstratives are RRCs. The current study investigates the internal structure of elements within noun phrases in Japanese and Mandarin. Japanese, like Korean, Mongolian, and Quechua, is verb final and has prenominal adjectives and prenominal RCs. Mandarin adjectives and RCs are also similar morphosyntactically. The analysis herein will attempt to determine whether the RRC analysis proposed by Cinque is a tenable explanation for the apparently deviant distribution of adjectives in Mandarin and Japanese.

## 2. Relative Clauses in Mandarin and Japanese

In both Mandarin and Japanese, RCs precede the noun that they modify. In Mandarin, the morpheme DE always directly precedes the modified head noun (Example 2). Hereinafter, DE will be analyzed as the complementizer for Mandarin RCs. In Japanese, however, the bare (3) or tensed form (4) of verbs in RCs directly precede the head noun modified by the RC. This contrast is shown by the minimal pairs in examples below.

Mandarin:

2. tamen zhong de shuiguo
   they grow *DE* fruit
   'the fruit that they grow'

Japanese:

3. karera-ga sodatsu kudamono
   they-NOM grow fruit
   'the fruit that they grow'
4. karera-ga sodatta kudamono
   they-NOM grow.PAST fruit
   'the fruit that they grew'

## 3. Prenominal Adjectives in Mandarin

Adjectival modification in Mandarin is strikingly similar, both morphologically and syntactically, to RC modification in Mandarin. Examples (5) and (6) illustrate two types of adjectival modification in Mandarin.

5. hong hua
   'a red flower'

6. hong de hua
   red *DE* flower
   'a flower that is red'

In example (5) above, the adjective hong 'red' directly precedes the noun that it modifies. In example (6) DE intervenes between the adjective and modified noun. When DE intervenes between an adjective and head noun, a RC reading is observed.

Li and Thompson (1981) note a semantic difference between adjectives that directly precede the nouns that they modify and adjectives + DE construction that can modify nouns. When adjectives directly precede a noun in Mandarin, there is often a "naming effect" (Li & Thompson, 1981, p. 119). When DE intervenes, however, the adjective describes a non-defining property of that noun.

7. hutu jiaoshou
   muddleheaded professor
   'professor muddleheaded'

8. hutu de jiaoshou
   muddleheaded DE professor
   'a professor who is muddleheaded.

Example (7) above shows the naming effect that is observed when an adjective directly precedes the noun that it modifies. Example (8) shows that when DE intervenes between the adjective and noun a RC like reading is observed.

**4. Prenominal Adjectives in Japanese**

Adjectival modification of nominals in Japanese is also morphosyntactically similar to relative clause modification in Japanese.

9. akai hana
red flower
'red flower'

As example (9) above shows, adjectives directly precede the nouns that they modify without any material intervening. A further similarity between RCs and adjectives in Japanese is that adjectives in Japanese can bear tense.

10. akakatta hana
red.PAST flower
'a flower that was red

Thus, to review, Mandarin RCs require an overt complementizer DE, while Japanese RCs disallow any sort of complementizer. In regard to adjectival modification, Mandarin has two types: one where DE intervenes between the adjective and noun, and one where the adjective directly precedes the modified noun. As for Japanese, no element appears between an adjective and the modified noun, and this is also the case for RC modification in Japanese. A further aspect that may support an analysis for some Japanese adjectives being RRCs is that Japanese adjectives can bear tense. In the following sections I investigate whether the noun modifying adjective +DE construction can be analyzed as a RRC. I will also examine whether Japanese has two forms of adjectival modification, as suggested by Cinque.

**5. Idioms**

Cinque (2005) argues that RRCs cannot form idioms with the nouns that they modify, as direct modification adjectives do. Indeed, idiomatic readings are only possible when adjectives directly precede a target noun in Mandarin.

11.

a. huang dou
yellow bean
'soybean'

b. huang de dou
yellow *DE* dou
'a bean that is yellow'

12.

a. xiang yan
fragrant smoke
'cigarette'

b. xiang de yan
fragrant *DE* smoke
'smoke that is fragrant'

The examples in (11) and (12) (Li and Thompson, 1981, p. 120) show that idiomatic readings are disallowed in the adjective + DE construction. A similar pattern is observed in Japanese when adjectives bear tense.

13.

a. samui jodan
cold joke
'an unfunny joke'

b. #samu-katta jodan
cold.PAST joke
'a joke that was cold'

14.
a. oishii hanashi
delicious story
'an intriguing story'

b. #oishi-katta hanashi
delicious.PAST story
'a story that was delicious'

Examples (13a) and (14a) show idiomatic readings of pre-nominal adjectives. Examples (13b) and (14b) show that tensed adjectives only have a literal reading.

The examples above provide some preliminary evidence for analyzing adjectives in Mandarin and Japanese as RRCs in certain contexts. Particularly interesting is that the presence of a tense morpheme on Japanese adjectives appears to indicate a RRC.

**6. Modifier stacking**

Cinque (2004) illustrates that there is a strong cross-linguistic tendency related to the ordering of adjective stacking for attributive adjectives: $Adj_{quantification} > Adj_{quality} > Adj_{size} > Adj_{shape} > Adj_{color}$ $Adj_{nationality}$. In Mandarin, bare form adjectives also require that adjectives of size precede adjectives of color (15a – 15b).

15.

a. da hong fangzi
big red house

'big red house'

b. *hong da fangzi
red big house
'big red house'

In the adjective + *DE* construction, however, this ordering need not be followed.

16.
hong de da de fangzi
red *DE* big *DE* house
'house that is red (and) that is big'

This aligns with an analysis of the adjective + *DE* construction as a RRC.

In Japanese, however, the issue is less clear.

17.
a. ookii akai ie
big red house

b. akai ookii ie
red big house

Examples (17a) and (17b) show that Japanese adjectives are not restricted to this order. Further, the free stacking order of adjectives in Japanese is not affected by the presence of tense (17a and 17b).

18.
a. akai ookikatta ie
red big.PAST house
'red house that was big'

b. akakatta ookii ie
'big house that was red'

The free ordering of attributive adjectives in Japanese can be explained if (17b) and (18b) involve a RRC containing only the adjective *akai* 'red' and a null tense morpheme. If this is the case, we may assume that tensed adjectives in Japanese are always RRC, but adjectives that do not bear tense can be either attributive adjectives or RRCs with null tense morphemes.

**7. Noun Phrase internal word order**

The paradigm below shows the possible word orderings of elements in noun phrases in Japanese.

**Japanese**

19.

a. kono Jon-ga tsukutta oishii pizza
this John-NOM make.PAST delicious pizza

b. kono oishii jon-ga tsukutta pizza
this delicious John-NOM make.PAST pizza

c. jon-ga tsukutta kono oishii pizza
John-NOM make.PAST this delicious pizza

d. *oishii kono jon-ga tsukutta pizza
delicious this John-NOM make.PAST pizza

'this delicious pizza John made'

The examples in (19) show that Japanese allows for the order Dem < RC < Adj < N (Example 19a), Dem < Adj < RC < N (Example 19b), and RC < Dem < AdJ < N (Example 19c). however, the adjective *oishii* 'delicious' cannot precede the demonstrative *kono*. This is unexpected if the adjective *oishii* 'delicious' can function as a RRC.

Mandarin has a much stricter word order within the NP than Japanese. According to the native speaker consulted, only the order DEM < Adj + *DE* < RC < N was viable (Example 20b).

**Mandarin**

20.

a. *zhe ge John zuo de haochi bisabing
this CL John make.PAST DE delicious pizza

b. zhe ge haochi de John zuo de bisabing
this CL delicious DE John make.PAST DE pizza

c. *John zuo de zhe ge haochi bisabing
John make.PAST DE this CL delicious pizza

d. ? haochi de zhe ge John zuo de bisabing
delicious DE this CL John make.PAST DE pizza

Interestingly, the native Mandarin speaker judged (20d) as only marginally acceptable. Cinque (2005) argues that the pre-demonstrative adjective can be accounted for if the adjective is a RRC; however, the marginal acceptance of (20d) brings into question necessity for such an analysis for Mandarin.

Although some evidence has been found in support of a RRC analysis of Mandarin and Japanese adjectives, both languages have a different distribution of adjectives and RCs in relation to the demonstrative: In Japanese, RCs - but not adjectives - can precede demonstratives, while the inverse is true of Mandarin. It is not clear why this should be if adjectives in these languages can be RRCs.

## 8. Intersective and non-intersective Adjectives

Cinque (2005) notes that non-intersective readings are only possible with direct modification adjectives. Nishiyama (1999) observes that, while less prominent, non-intersective readings are possible in Japanese.

21.

a. kanojo-wa utsukushii dansaa
she-TOP beautiful dancer
'she is a dancer and she is beautiful' **(intersective reading)**
?'she is a dancer and her dancing is beautiful' **(non-intersective reading)**

b. san-nin-no utsukushii dansaa
3-CL-GEN beautiful dancer
'three attractive dancers'
'three dancers who dance beautifully'

Example (21a) is ambiguous between an intersective reading and a non-intersective reading. Example (21b) shows that the phrase is still ambiguous when a numerical classifier precedes *utsukushii*.

22. utsukushii san-nin-no dansaa
beautiful 3-CL-GEN dancer
'three attractive dancers'

When the numerical classifier is closer to the noun than the adjective, however, (as in example 22) only the intersective reading is available. This aligns with Cinque's (2005) claim that the ordering Dem > Adj > Num > N can be explained if the Adj above Num is actually a RRC. This suggests an internal structure of Dem < Adj from RRC < Num < Adj < N for Japanese.

In regard to Mandarin, however, the exact opposite pattern we would predict (if the Adj + *De* construction is taken to be an example of a RRC) is observed. Paul (2010) shows that non-intersective adjectives are only grammatical in Mandarin when they are marked with *DE*.

23. yiqian *(de) xiaoshang
former DE school.president
'the former school president'

Assuming that Cinque's (2005) argument that only direct modification adjectives can give non-intersective readings is correct, example (23) forces us to reanalyze the adjective + *DE* construction. As we have already found some support for the adjective + *DE* construction as a RRC, we may wish to argue that *DE* indicates that an adjective is in an RRC, but in other instances the adjective + *DE* construction may still be a direct modification adjective. Another option would be to reject Cinque's (2005) claim that only direct modification adjectives yield non-intersective readings.

An argument can also be made that the Japanese data supports rejecting Cinque's assertion that only direct modification adjectives can give rise to non-intersective readings, as non-intersective readings of attributive adjectives in Japanese (example 21) are only marginally acceptable. Further, Namai (2002) reports that to the extent that (20a) yields a non-intersective reading, the same reading is also possible when the adjective bears tense (24).

24.

kanojo-wa utsukushikatta dansa
she-TOPIC beautiful.PAST dancer
'she was a dancer and she is beautiful' **(intersective reading)**

?‘she was a dancer and her dancing is beautiful’ **(non-intersective reading)**

As noted above, there is some good reason to analyze prenominal tensed adjectives as RRCs, notably, tensed adjectives block normally available idiomatic readings of prenominal adjectives. The stacking order of adjectives can also be partially explained by an analysis that assumes some forms of adjectives are RRCs. Thus, if Namai’s (2002) judgment is correct, this further calls into question Cinque’s (2005) claim that only direct modification adjectives give rise to non-intersective readings.

## 9. Discussion and Conclusion

The current paper found some support for Cinque’s (2005) proposal that the divergent word order of adjectives in noun phrases, as predicted by his “roll-up” operation, can be accounted for if these adjectives are analyzed as RRCs. The investigation also revealed two surprising finds: notably, Mandarin and Japanese diverge as to whether they allow adjectives or RCs before demonstratives. The fact that both of these languages allow only adjectives or RCs, but not both, to precede demonstratives, brings into question whether or not adjectives can be analyzed as RRCs, as it is not clear why only one or the other should be allowed if adjectives can function as RRCs. A further challenge to the RRC analysis is that non-intersective adjectives in Mandarin require *DE.* To further the current analysis, Cinque’s (2005) claim that only direct modification adjectives can give rise to a non-intersective reading needs to be further evaluated, as this makes the exact opposite prediction for Mandarin.

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# Linguistics for language learning: An approach for learner autonomy

Paul Richards

**Abstract.** This article details efforts to teach linguistics to sophomores studying at Miyazaki International College (MIC). This course was created for students who were unable to study abroad because of the Covid-19 pandemic. The goal of the course was to target the four skills of reading, writing, listening, and speaking, while also fostering autonomous language learning by developing greater language awareness.

## Introduction

Linguistics is a multidisciplinary area of study that aims to scientifically understand the nature of language, its uses, and how it is acquired. As a content course, linguistics is a unique area of study for students at MIC, because while it is related to language, acquisition of language is not typically the object of instruction. The goal of the current course, however, was to directly connect theoretical content of the field of linguistics with language instruction to help students to develop metacognitive strategies to better reflect on their own language learning. Cohen (2011) writes that "[m]etacognitive strategies deal with preassessment and preplanning, online planning and monitoring, and postevaluation of language learning activities and of language use events" (p. 19). Course activities were designed to promote reflection on language learning strategies at each of these stages.

The course was divided into six modules that covered areas typical to an undergraduate linguistics course. These included an introduction to linguistics, phonetics/phonology, morphology, syntax, pragmatics, and second language acquisition. For each of these modules I prepared short texts that introduced basic concepts related to each of these areas of study. Each article was written to include fourth and fifth band New General Service List (NGSL) vocabulary (Browne, Culligan & Phillips, 2013) and ranged from 750 to 850 words in length.

Each module typically began with a critical thinking activity designed to develop interest and awareness in the topic. After this, a reading article was introduced, and time was given for students to read sections of the article on their own and to look up unfamiliar vocabulary. Students then worked in groups to check their understanding of the article with their peers. After confirming comprehension of assigned sections of the article, students then practiced summarizing the main ideas of the article. Discussion questions related to the article were also used to give students opportunities to practice working in groups and to promote critical thinking. Writing was incorporated in the course through open ended journal assignments where students were encouraged to write about things that they had learned in class and to raise additional ideas or questions they had about the content. The following sections present key elements from each module.

**Introduction to Linguistics**

The goal of the first module was to provide an overview of the course and to get students interested in the material. This was done by illustrating that the field of linguistics has played a role in the development of technology that students use in their day-to-day lives (e.g., computer search technology, machine translation, auto-correct, voice recognition technology). Figure 1 shows one such example from the first reading. The image shows a translation of the Japanese sentence *korona-ga hayatteiru*, which can mean either “Corona is spreading” or “Corona is popular”. In this instance, the online translation software has translated this as “Corona is popular”. This was included in the reading to get students to discuss whether this was a good translation and to illustrate the complexities of human language.

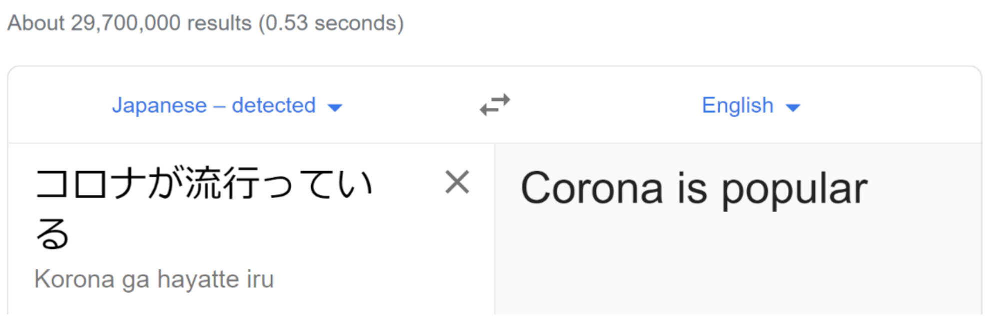



Figure 1. Limitations of machine translation devices

The project for the introduction to linguistics module was designed to get students to think about language scientifically. For this, students were asked to come up with an explanation for when 何 is pronounced as なん(nan) and when it is pronounced as なに (nani). The use of *nan* and *nani* is determined by two rules. The first is that in cases where 何 targets a quantity, it is pronounced as *nan* (e.g., 何枚, how many sheets, 何才, how old ), and in the case of quality, it is pronounced as *nani* (e.g., これは何). The expressions 何人 and 何色 clearly convey this contrast, as the reading changes depending on whether what is questioned is a quantity (なんにん、なんしょく) or a quality (なにじん、なにいろ). The second rule that interacts with the first relates to the sound that follows 何. When 何 is followed by an alveolar (e.g. [t], [d], [ɾ]) it is pronounced as nan (e.g., 何ですか, 何って、何の). This is clearly demonstrated by the difference between「何」and「何ですか」as both target quality and the minimal difference is whether 何 is followed by an alveolar.

The purpose of this activity was to get students to come up with hypotheses and to test those hypotheses with data. Because this is an extremely common feature of

Japanese grammar, it was easy for students to come up with many examples of sentences where 何 is pronounced as *nani* and *nan*. It was also possible for me to challenge students' hypotheses and to provide them with examples to guide them in the appropriate direction. Through this, it was possible for students to experience the scientific process of making observations, formulating hypotheses, and then revising their hypotheses based on new data.

Each of the subsequent reading articles was designed to present a basic introduction to the major areas of linguistic study and to provide students with similar critical thinking activities. Each module was also connected to practical issues of English language learning, and throughout each module students worked on projects that targeted language study related to that module. The following sections present critical thinking activities and language learning activities that were included in each module.

***Phonetics/Phonology***

The phonetics/phonology module was designed to introduce basic concepts of phonetics and phonology and to connect research in this area to pronunciation instruction. The following passage from the phonetics/phonology reading (Example 1) describes prosodic features of English pronunciation. One benefit of introducing these terms in the reading article was that in addition to functioning as course content, it also introduced valuable metalanguage for providing pronunciation feedback to students.

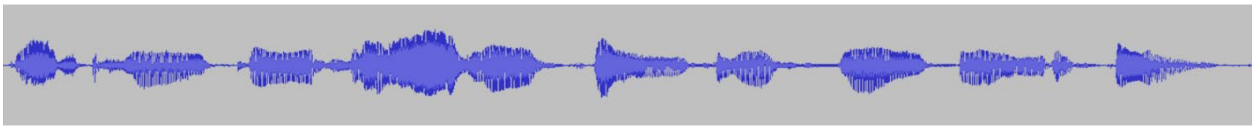
1. Features of English pronunciation

Besides individual sounds, phoneticians and phonologists also research the rhythm, pitch, and intonation patterns of languages. One characteristic of English is stress. Stressed words are louder and longer and said with higher pitch than unstressed words. In English, important, or new information gets stress and unimportant information does not get stress. Usually, function words like articles (a, the), prepositions (in, on, at, to), pronouns (he, she, him, her), and conjunctions (and, or) do not get stress in English.

As noted above, discussion questions in the reading articles were used to promote critical thinking and group work between students. An example of one such question asked students to apply the information from the phonetics/phonology reading article by identifying which sound wave was produced by a NS of English and which was produced by a NS of Japanese (Example 2).

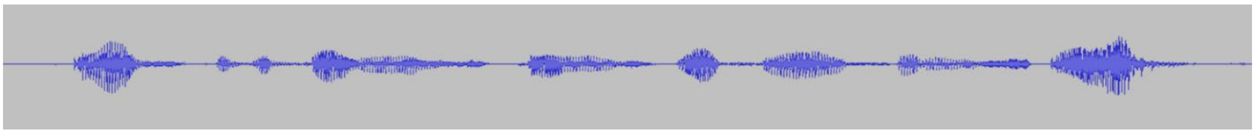
2. Below are two pictures of sound waves of a native speaker of English and a native speaker of Japanese reading the sentence "Ask her to bring these things from the store". Which was recorded by a native speaker of English and which was recorded by the native speaker of Japanese? Why do you think so?

a)



Ask her to bring these things with her from the store

b)



Ask her to bring these things with her from the store

As the goal of this course was to get students to consider areas where they can improve their own language ability, students were encouraged to reflect on their own language learning needs and goals. Impersonal phrasing was generally used when students were doing group work (e.g., Japanese speakers), so that students did not have to feel as if they were reporting on their own difficulties with English. Care, however, was taken not to frame Japanese learners as deficient at learning English by highlighting that learning a second or foreign language is difficult for anyone. This was done by including complementary examples of difficulties English learners of Japanese commonly face (Example 3).

3. Discussion question for phonetics/phonology article
   What other sounds are difficult for Japanese speakers learning English? What sounds in Japanese do you think are difficult for native English speakers?

For the final phonetics/phonology projects, students recorded the "Please call Stella" passage (Example 4) from The Speech Accent Archive (Weinberger, 2015).

4. Please call Stella passage

   Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

This passage was chosen because the Speech Accent Archive provides audio files of hundreds of native and nonnative speakers reading this passage. As students primarily study abroad in Australia, Canada, New Zealand, the United Kingdom, and the United States, recordings produced by male and female speakers from each of these countries were made available to students to listen to and to practice imitating.

Instruction targeted prosodic features of speech, as these have been shown to play a greater role in overall intelligibility than segmentals (Derwing & Rossiter, 2003). Specifically, emphasis was placed on connected speech, word stress, and sentential focus. After some practice, students were given a textually enhanced version of the script to visually reinforce the fact that the speech stream is not segmented according to the spaces between words (Example 5). In this example, instances of connected speech are shown orthographically (e.g., ASKər for “ask her”), stressed words are written in capital letters, <ə> (schwa) is used to indicate unstressed syllables, “/” indicates thought groups (groups of words that are spoken together), and bolded words indicate words that receive sentential focus.

5. Please call Stella (enhanced text)

PLEASE CALL **STE**LLə/ ASKər tə BRING THESE **THINGS/** WITHər frəm thə **STORE**/ SIX SPOONZə **FRESH** SNOW PEAS/ FIVE THICK SLABZə **BLUE** CHEESE/ n MAYBE’ə SNACK forər BROTHər **BOB**/ WE ALSO NEEDə SMALL PLASTIC **SNAKE**/ nə BIG TOY **FROG/** fər thə **KIDS**/ SHE cən SCOOP THESE THINGS intə THREE RED **BAGS**/ n WE wəll GO MEEDər **WEDNES**DAY/ ət thə **TRAIN** STATION.

Students also practiced annotating prosodic features of speech for different speakers. The purpose of this was to get students to attend to prosodic features of English and to illustrate the areas where English speakers differ and where they show commonalities. Students generally responded favorably to these exercises and several students even commented that they felt that this module helped recreate some of what they would have learned during their study abroad experience. Notably, students reported that they had never received instruction in this area, so although this module was short overall (approximately six class sessions), it is hoped that these exercises contributed to greater awareness and noticing of prosodic features of English.

***Morphology/Syntax***

Due to the wide variation in vocabulary and grammatical knowledge, these modules were designed to be more open ended and to reflect the learning needs of the student. In the morphology component of the course, students considered the meaning of prefixes and suffixes in English. Example 6 presents a discussion exercise given to students.

6. Look at the examples of the prefixes and suffixes of English. Try to think of words with these prefixes and suffixes. What are their meanings?

| **Prefix** | **Suffix** |
|---|---|
| **Pre-** | **-er** |
| **Un-** | **-ness** |
| **Con-** | **-ly** |
| **Dis-** | **-ist** |
| **Re-** | **-ment** |
| **Anti-** | **-ful** |
| **In-** | **-ship** |

For the morphology project, students were required to print out 750 words from a Wikipedia article on any topic that they were interested in and to circle all prefixes and suffixes in the article. One aim of this activity was also to make students familiar with how free online resources such as Wikipedia can be used for effective language study.

The syntax module also targeted individual study. In this module students completed a multiple-choice grammar test in Moodle. Items on the grammar diagnostic were associated with specific grammatical targets, and performance on the grammar test was used to assign individual grammar activities for the areas where each student showed the most difficulty. Overall, students were least accurate with perfect aspect, particularly in past perfect contexts (e.g., I had never studied Korean before coming to MIC).

***Pragmatics***

The pragmatics reading article focused primarily on speech acts (Searle, 1969). This article introduced the variables of power, social distance, and imposition from classical politeness theory (Brown & Levinson, 1987) and illustrated how these may influence the language that we use.

7. In pragmatics, researchers will often look at how people do things like refuse, request, or promise in different situations. Some variables that influence the language people use are power (Is the person a boss or employee? Is the person a teacher or a student?), social distance (Have the people known each other for or long time or did they just meet?), and imposition (How much are you bothering the other person? Are you asking to borrow a pen or a car?).

Students were also asked to consider other factors that influence linguistic choices that they make. Several other variables that came up during discussion were gender, age, formality, rights/entitlements, and emergencies.

For the first language related exercise in the pragmatics unit, I asked students to write an imaginary e-mail to me scheduling an appointment to meet after class. This was intended to establish a baseline in their e-mail practices. I then presented students with anonymized e-mails that I had written to professors, friends, and colleagues. Each of these e-mails involved me scheduling a time to meet the other person. Students were asked to try to determine my relationship with each person (i.e., was this person my superior, colleague, friend, etc.) from the language used in the e-mail. The purpose of this exercise was to promote pragmatic awareness by getting students to consider how interpersonal variables influence the language forms we use. I chose to use my own e-mails for this assignment to ensure that language was authentic. Also, I wanted to illustrate that this was simply how I had written e-mails and that other people may choose to use different wording or phrasing.

8. E-mail identification task

> Hi <Last Name>,
>
> Can I request a time to meet in the coming week?
>
> Thank you

The final project for the pragmatics module required students to reflect on their own language use in e-mails. For this assignment, students reviewed the practice e-mails that they wrote earlier in the course and then wrote three more imaginary request e-mails to me. In general, students used more indirect request strategies after completing the module, although several students did continue to use the same direct forms they had used at the beginning of the course.

***Second Language Learning and Teaching***

The final module focused on major changes in second language acquisition theory from the 1960s to the early 2,000s. The reading article addressed research related to the role of input (Krashen 1982), output (Swain, 1985), and interaction (Long, 1996).

Before introducing the reading article, students completed a survey about their beliefs related to language learning and language teaching from Lightbown and Spada (2013, p. 3). Table 1 presents an abbreviated version of this survey. Students then discussed their opinions on these topics in groups. The final project for this module was for students to complete the survey again and to discuss if any of their opinions had changed from class discussion or from information covered in the reading article.

**Table 1**

*Language learning survey (Lightbown & Spada, 2013, p. 3)*

| | **Strongly Agree – Agree – Disagree – Strongly Disagree** |
|---|---|
| 1 Languages are learned mainly through imitation. | Strongly Agree – Agree – Disagree – Strongly Disagree |
| 2 Parents usually correct young children when they make grammatical errors. | Strongly Agree – Agree – Disagree – Strongly Disagree |
| 3 Highly intelligent people are good language learners. | Strongly Agree – Agree – Disagree – Strongly Disagree |
| 4 The most important predictor of success in second language acquisition is motivation. | Strongly Agree – Agree – Disagree – Strongly Disagree |
| 5 The earlier a second language is introduced in school programs, the greater the likelihood of success in learning. | Strongly Agree – Agree – Disagree – Strongly Disagree |

**Areas for future development**

Students generally responded positively to the exercises in this course. Although only impressionistic, students seemed to favor the phonetics/phonology and pragmatics modules over the morphology and syntax modules. This may be because the assignments for the morphology/syntax modules were more like conventional classroom language activities. In the case of the morphology project, students also reported difficulty with discerning the meaning of prefixes in English, and this most likely reflects the great deal of semantic overlap between morphological prefixes in English (e.g., *dis*trust and *mis*trust). Greater preparation and planning in the presentation of this material could potentially alleviate some of the challenges that students faced in this area. Students also showed little change in their perceptions of language learning at the end of the second language acquisition module. It is not clear if this was because they did not find the information in the reading article convincing or if they simply had difficulty understanding the article. More time may be needed for students to integrate knowledge gained from this module into their own belief systems.

Moving forward, I would like to develop instruments for measuring how linguistics instruction influences language study habits and learning goals of students and whether this contributes to greater language learner autonomy. Increasingly, second language researchers are recognizing that teaching learners how to learn language is an integral component of language instruction (Cohen, 2011; Shively, 2011), and content area linguistics courses may prove to be a valuable vehicle for getting students to think about their own language learning practices.

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## Book Review

Booth, Dawn (2018). The Sociocultural Activity of High Stakes Standardized Language Testing: TOEIC Washback in a South Korean Context. Springer. https://doi.org/10.1007/978-3-319-7446-3

**Reviewed by Ellen Head**

The impact of TOEIC on the lives of language learners in Japan and Korea can hardly be overemphasized. At university level, TOEIC is a convenient tool to assist decisions about placement and entry to higher levels of courses, and in the world of work, it is used as a criterion to screen applicants for competitive jobs. Although language professionals may express ambivalent or critical views of TOEIC, learners cannot help being influenced by the gate-keeping functions of the test. In *The Sociocultural Activity of High Stakes Standardized Language Testing*, Booth attempts to dissect the influence of the TOEIC in the lives of individual learners, at the same time as proposing an innovative model of test washback which uses sociocultural theory and activity theory to look at test consequences from overlapping perspectives. As Booth writes:

> Where washback is concerned, a sociocultural perspective can help shed light on how human social and mental activity is organized through standardized testing – powerful mediatory artefacts that adapt to meet the needs of communities and individuals. (Booth, p. 79.)

Booth's research centered on the study habits and emotions of Korean students during the 6 months prior to taking the TOEIC, through a series of in depth interviews of six students, supplemented with survey and diary studies of a group of 23. Relationship to the wider context is amply provided by a consideration of the theoretical concepts related to language testing as well as the historical background to language testing in Korea (and the influence of Confucianism), the TOEIC test itself and research into the TOEIC in the global context. Booth proposes a new model of washback, arguing that washback should be socially situated and calling for a greater emphasis on student agency in research. The theoretical framework is somewhat complex but the explanations are clear and the implications are that reliance on TOEIC can have detrimental impacts on motivation and study. However, taking a positive approach, Booth believes that this is not a reason to abandon TOEIC but to carry out further research on its impact. The models and approaches used in Booth's study could be adapted to research into other situations of test-driven study, not only the TOEIC.

The book can be divided into three parts. Chapters 1 to 5 cover the necessary background to the study, with introductions to South Korea, the TOEIC, washback and sociocultural theory. Chapters 6 to 8 consist of detailed case studies of six students, three majors and three non-majors, showing how they prepared for the TOEIC. The final three chapters relate the case-histories to the wider context of washback studies and describe Booth's model of washback which synthesizes activity theory and sociocultural theory to emphasize the role of learners and learning communities in washback.

Readers who are involved in language teaching at university level may find the case studies the most interesting part of the book. The students differ widely in their approach to study. Generally they are motivated by the need to have a TOEIC score for work, by parents and by the community around them. The English majors tended to spend more time on studies which were not directly related to TOEIC while the non-English majors attended classes in TOEIC preparation schools and were strongly influenced by the teachers they encountered there. Some of the tropes that recur are emphasis on memorization, “everybody is doing it”, stress, and the tension between exam-focused study and broader English learning. Booth's research questions look at the motives and goals of learners who prepare for the TOEIC, the actual actions they take and the perceived outcomes of the actions. Among the case study subjects, we see the negative effect of narrower studies and disappointment, particularly in one student who seemed to join a class which was too high for her level (about 550 at the end of the period). "If students could study something they were interested in, in the time they spend on the TOEIC, they could use their knowledge for their majors more efficiently." (p.131) It seemed that students whose level was already quite high had a more positive experience. However one remarked that TOEIC study did not help him to progress in oral English and actually made him more hesitant. There was also an effect over time when getting a higher-than-expected score on a preliminary TOEIC-like test made the student stop studying, leading to a lower score on the real test.

Why should we concern ourselves with such matters if we are already free of the responsibility to teach students for the TOEIC due to our own institutional situation or to our own feeling that it is not educationally justifiable to "teach to a test"? The answer is that TOEIC has a great impact on our students. Although Japanese companies are generally not as demanding as Korean ones in terms of TOEIC score, the use of TOEIC for program evaluation, placement and course entry gatekeeping gives it face-validity to students. Rather than weaning students away from seeing their progress in terms of a TOEIC score, perhaps we should be researching exactly what actions they are taking in relation to TOEIC and how that fits into the pattern of their all-round proficiency development. This book would be of great interest to anyone in teaching who would like to deepen their knowledge of language testing, as the explanations are very clear. It is also a well-documented account of how to do mixed-methods research with a focus on longitudinal studies of student experience and autonomy. For those who are professionals of language testing, it provides an innovative model of washback with implications for the way researchers deal with issues of content validity and ethics around washback.