University of South Australia | Ehrenberg-Bass Institute for Marketing Science

Australian Government
Australian Grape and Wine Authority

Understanding Asian market demand using Asian consumers in Australia





FINAL REPORT to

Australian Grape and Wine Authority

Project Number: **USA-1101**

Principal Investigators: **Armando Maria Corsi – Justin Cohen – Larry Lockshin**

Research Organisation: **University of South Australia**

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Armando Maria Corsi

Justin Cohen

Larry Lockshin

Ehrenberg-Bass Institute for Marketing Science

University of South Australia



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1. Abstract

One of the key cohorts to influence in Asia is the younger and more educated part of the population. Australia is in a unique position to access a sample of this important segment, because over 500,000 Asian students are currently studying in Australia. The results of this project show that an education by regions-of-origin (study 1) and with Western terminology (study 2) are more effective in improving the likeability, willingness-to-pay (WTP) and perceived price point (PPP) of Australian wines. In addition, one-off education sessions (e.g. master classes) are a more time-effective way to shift consumers' choice (study 3).

2. Executive summary

The main results of this project can be summarised as follows:

1. Study 1 suggests that an education by regions-of-origin is more effective than one by grape variety, and can improve the likeability, WTP, and PPP of wines. However, an education by grape variety is able to make respondents more consistent in their selection of grape varieties and regions-of-origin, while an education by regions-of-origin can influence respondents to be more consistent only in the selection of grape varieties. Overall, the results show that an education by regions-of-origin is more effective because the changes in likeability, WTP and PPP are strategically more important than an increased consistency in the selection of grape varieties or regions-of-origin.

2. Study 2 suggests that an education based on Western descriptors is slightly more effective than an education based on Chinese terminology. This is not surprising, as, although participants are from Asia, they have been living in Australia for a period of time. Therefore the participants have been exposed to culture, media and information discussing wine in a Western context. Even if only in very small amounts, we cannot negate this impact. In addition, an educator with a Western background delivered the course in English. The respondents could possibly experience some incongruence between the Chinese terminology and food matching due to the mode of delivery.

3. Study 3 – Experiment 1 confirms and validates the outcomes of study 1 and 2, and rules out the possibility that the results of study 3 – Experiment 2 are due to factors other than the experiment itself. Study 3 – Experiment 2 suggests that one-off education sessions (e.g. masterclasses) are a more time-effective way to shift consumers' choices. In addition, assuming that running a one-off education session is cheaper than running a 5-session one, the results of experiment 2 suggests that one-off education sessions represent a cost-effective way to shift consumer preferences.

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Third, we wish to thank our friends at “T-Chow” restaurant in Adelaide, for allowing us to use their restaurant as the venue for the long-term session in study 3.

We are also very grateful to Prof. Riccardo Scarpa and Assoc. Prof. Mara Thiene, who helped us generate the combinatory design to conduct the Discrete Choice Experiment we used in study 3.

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3. Background

Asia is on the radar of most wine industry professionals. However, many new world producers, Australia included, suffer because of the strong perception of French wine held by consumers in Asia and, in particular, China (Cohen et al., 2014). Education is a core component of the Australian economy. Eighty per cent of Australian international students come from Asia (The Times, 2013). This presents a unique opportunity to investigate how this cohort best learns to appreciate wine. Increasing their knowledge of wine during a formative and positive period of their lives whilst they are living abroad could increase their likelihood to become ambassadors for Australian wine when returning home.

Education plays a fundamental role in helping to develop preferences. Therefore, potential exists to influence new Asian wine drinkers to prefer Australian wine styles. However, the role of education in the wine sector has barely been investigated scientifically. To the best of the authors' knowledge, few papers have dealt with this issue, and none in Australia. LaTour et al. (2011) show that when novice consumers are exposed to a conceptual type of training (i.e. explanation and discussion on wine production and varieties) they are better able to identify wines previously tasted, and they are less influenced by fictitious advertising. In addition, these consumers think the wine is of higher quality and they are willing to pay a higher price for it. Another study by Sagala (2013), a Canadian wine educator, shows that participation in a wine course leads to an increase in perceived subjective knowledge concerning the importance of varietal and regional attributes, as well as willingness to talk about wine.

While LaTour et al. (2011) tackle the issue of different training methods, they do not study how to plan a traditional type of wine education course. Conversely, Sagala (2013) analyses the effect of a real wine education course, but does not test different delivery approaches. Therefore, the purpose of this research is to fill the gaps left by these two studies and to understand what educational approach is most able to improve the perception of Australian wines among younger Asian students, via a realistic wine education course.

The project is divided into three studies. In study 1 an education based on regions-of-origin or based on grape varieties are tested to determine which approach is more successful at improving the likeability, WTP and PPP for a series of red wines tasted blind. In study 2 we test if the impact of wine education on increasing the likeability, WTP and PPP of Australian wines differs using education based on traditional Western descriptors and relative food matching suggestions, or their Chinese equivalent terms and food matching suggestions. In study 3 we test the number of sessions necessary for participants to shift preference toward the elements of wine which educators teach them about during a course. Secondly, we want to see whether the observed change in participants' preferences hold in the long-term.

3.1. Amendments to the original project aims

Two variation requests have been submitted to the Australian Grape & Wine Authority (AGWA) and approved for this project.

The first variation request was approved on the 18/02/2013. The project was originally designed as a student wine club. After one year of trial, the researchers found it impossible to maintain enough members on a regular basis to achieve the objectives of the research project. A reasonable number of students joined, but not enough attended the full set of sessions to make any definitive conclusions that would answer the objectives. Consequently, the researchers asked for a variation in the objectives and a more substantive variation in the methods. The overall goal of the project and the outputs stayed the same. The key difference was replacing the club with a series of experiments in order to clearly meet the objectives of the project.

The second variation request was approved on the 18/08/2014, and concerns study 3. The aim of this study was to compare face to face with online wine education. Despite the planning, the researchers found it logistically impossible to assure both groups would taste the same wines for the same period of time. Therefore, it was not possible to make a true comparison. The researchers suggested instead that testing the number of sessions to achieve a positive result was a better and more practical use of the grant funds.

A key aspect of wine education still unknown is the number of sessions a wine education program should have in order to make new wine drinkers able to incorporate the key concepts the wine education program is designed to convey. Let's take, for example, a program such as "Regional Heroes". The objective of this promotional program is to help consumers understand Australian regionality: what grape varieties grow best in key regions to produce important wine styles in Australia. However, do we know how many sessions would be needed to make sure that Chinese consumers take the region-grape variety link on board to affect their decision-making? The new approved study 3 objectives of the project aimed at answering this question.

In order to obtain more meaningful results, the researchers also requested to use the budget originally allocated to study 3 and 4 for study 3 only. The focus of study 3 was no longer on the "quality" of the information passed to the participants (i.e. education by regions-of-origin vs. education by grape variety). The "quantity" of information (i.e., the number of sessions necessary to influence preferences towards the concepts conveyed by the education) was now the priority. Accordingly, the project would benefit from an increase in sample size. The researchers aimed at recruiting 120 respondents, plus a control group of 40 to 50 people. These figures are approximately double the number of participants recruited in study 1 and 2.

4. Project aims and performance targets

4.1. Original project aims and performance targets

The project aims to answer three main research questions:

1. What are the preferences of Asian students (as consumers) and their wine knowledge at an early stage of their studies in Australia?
    a. Are these different by country?
    b. Are these typical of Asians, who do not study in Australia?
2. How can a wine club, where a range of Australian wine educators and producers can engage the students directly, help build Asian students' knowledge and preference towards Australian wines, while allow the wine sector to better understand their preferences?
    a. Influence of different types of training, e.g., general knowledge, tasting, production, food matching
    b. Experiments to test styles, packaging, new products
3. How do students' wine preferences change during their club membership?
    a. Are these different by country?
    b. How do they compare to a similar cohort of Chinese people, who do not study in Australia?

Outputs and Activities 2011–12

	Output	Target Date	Activities
a	Start club	30/08/2011	• Hire part time students, produce merchandising (logo, cards, posters, leaflets, etc.) • Buy glasses, spittoons and paper towels • Create questionnaire • Press release
b	Club events	30/06/2012	• Plan 8 wine events at City West Campus;(Sept-Nov; Feb-June); • Organise wineries and speakers • Organise experiments • Get alcohol licence • Book security guards
c	Bring wine educators to UniSA for a wine	30/05/2012	• Organise a wine masterclass at UniSA.

Outputs and Activities 2012–13

	Output	Target Date	Activities
a	Report and disseminate knowledge on first year project results	31/12/2012	• Collect and analyse questionnaires (in situ and on line) • Publish results on the website • Produce trade magazine articles • Press release • Write one conference paper
b	Survey of students returning to Asia	30/06/2013	Ongoing survey (at 6 and 12 months after students return home)
c	Keep the wine club running	30/06/2013	• 10 meetings July-June • Organise wineries and speakers • Organise experiments • Get alcohol licence • Book security guards • Check merchandising stock
d	Education on Australian wine regions	30/06/2013	Guest speakers or possibly visits to wineries in South Australia
e	Report and disseminate knowledge on second year project results	30/11/2013	Collect and analyse questionnaires (in situ and on line). • Publish results on the website • Produce protocol for running a wine club • Produce trade magazine articles • Press release • Write one conference paper • Write two scientific articles (target: B or A journals)
f	Discuss the results of the project with academic and industry bodies	30/11/2013	Organise workshop at UniSA on the results of the project and discuss further project developments for industry and universities.

4.2. Revised project aims and performance targets

The project aims to answer three main research questions:

1. What are the preferences of Asian consumers and their wine knowledge at an early stage of their studies in Australia?
2. How can an education program, where a range of Australian wine educators and producers can engage the students directly, help build Asian students' knowledge and preference towards Australian wines, while allowing the wine sector to better understand their preferences?
    a. Influence of different types of training, e.g. general knowledge, tasting, production, food matching
    b. Experiments to test styles
3. How do students' wine preferences change during their participation in different means of wine education?

This section describes the output and performance targets from the project application.

Outputs and Activities 2011–12

	Output	Target Date	Activities
a	Start club	28/02/12	Hire part time student, produce merchandising (logo, cards, posters, leaflets etc.)
			Buy glasses, spittoons and paper towels
			Create questionnaire
			Press release
b	Bring wine educators to UniSA for a wine masterclass	30/05/12	Organise a wine masterclass at UniSA
c	Club events	30/06/12	Plan 9 wine events at City West Campus (Sept-Nov; Feb-June)
			Organise wineries and speakers
			Organise experiments

Outputs and Activities 2012–13

	Output	Target Date	Activities
a	Report on first year data	30/07/12	Collect and analyse questionnaires (in situ and on line)
b	Initial set of 3 waves of experiment	30/06/13	Comparing presentation of wines using region compared to grape variety
			Organise wineries and speakers

	Plan and deliver experiments.	30/06/13	Organise experiments

Outputs and Activities 2013–14

	Output	Target Date	Activities
a	Report on first experiment	30/07/13	Collect and analyse questionnaires (in situ and on line).
b	Plan second wave of experiments	30/07/13	Based on which works better (region or grape variety) use this to understand how an education based on Western terminology works in comparison to an education based on Chinese terminology; both to include wine tastings
c	Plan and deliver experiments	30/11/13	Organise wineries and speakers
			Organise experiments
d	Report on second experiment	31/12/13	Collect and analyse questionnaires (in situ and on line).
			Publish results on the website
	Disseminate knowledge on project results		Produce trade magazine articles
			Press release
			Write one conference paper

Outputs and Activities 2014–15

	Output	Target Date	Activities
a	Third set of 3 waves of experiment	15/11/14	Test the number of education sessions necessary to elicit an increase in preference towards the content of the education sessions and its long-term effects
b	Plan and deliver experiments.	15/12/14	Organise wines and speakers Deliver results of the experiment
c	Disseminate knowledge on project results	31/12/14	Publish results on the website
			Produce trade magazine articles
			Press release
			Write one conference paper
			Write two scientific articles (target: B or A journals)

5. Study 1

5.1. Introduction

In this first experiment, we test whether an education based on regions-of-origin or based on grape varieties improve the likeability, WTP and PPP for a series of red wines tasted blind.

5.2. Method

The method used in this study is divided in two sections: a) the selection of the wines to be assessed in the blind sessions by the participants and b) the organisation of the education courses.

For the first part of the method, the Australian Wine Research Institute (AWRI) helped the researchers select six red wines, which are representative of the main styles of red wines available in Australia. The focus on red wines is due to the fact that they represent the 85% of what Australia exports to China.

For the second part of the method, a convenience sample of Asian people living in the Adelaide metropolitan area is recruited via several social media platforms. In order to qualify for the study, participants need to be between 18 and 30 years old, born in an Asian country and have lived there for at least ten years. The students need to attend all the scheduled sessions in order to receive a gift card as compensation for their time.

Dependent variables: All participants convened in a central location for a hedonic test in Adelaide. Each participant evaluates all six wines, representative of the main styles of red wines available in Australia and potentially exported to Asia. The wines chosen were characterised by the AWRI sensory descriptive panel, as follows:

- 2011 Australian Shiraz: light flavour, sweet, soft, red fruit and vanilla
- 2010 Barossa Valley Grenache Shiraz Mouvedre: red fruit, soft, low oak, moderate alcohol
- 2009 Margaret River Cabernet Sauvignon: green, dark fruit
- 2010 Coonawarra Cabernet Sauvignon: green, stalky, high alcohol
- 2008 McLaren Vale/Clare Valley Shiraz: complex, well regarded, neutral
- 2010 Barossa Valley Shiraz: rich dark fruit, oak, high alcohol and astringency

The wines are presented monadically using a balanced randomised presentation order across respondents with three-digit coded ISO standard wine glasses. Each glass contains 30ml of wine. Participants are advised to rest between the wines and drink some water. Assessments are made on paper with an individual questionnaire presented for each wine. The participants rate each wine on two sets of variables, continuous and categorical:

- Categorical:
  - Grape variety (choice of five different grape varieties)
  - Region (choice of five different wine producing regions)
  - Wine style (choice of five different wine styles, from 'Light & Sweet' to 'Dark & Oaky')
- Continuous:
  - Overall liking on a nine-point hedonic scale ('dislike extremely' to 'like extremely')
  - Willingness-to-purchase (WTP) on a five-point Likert scale ('definitely would not purchase' to 'definitely would purchase');
  - Perceived price point (PPP) on a five-point Likert scale ('$8 or below' to 'over $25').

Three groups of participants attend the central location hedonic test. Two groups take part in a wine education course between the two blind tasting sessions, while the control group does not receive any training.

Independent variables: the participants who qualify for the study and select to attend the full education course are randomly assigned to join one of the two scheduled courses – education by grape variety (Anderson, 2009; Szolnoki et al., 2010; Boatto et al., 2012) or education by regions-of-origin (Perrouty et al., 2006; Remaud and Lockshin, 2009; Bruwer and Johnson, 2010). These two approaches are selected because these two attributes often represent, after price, the key choice drivers for wine, especially among Generation Y consumers (Lockshin and Corsi, 2012), which are the target population in this study. Each course is comprised of three one-hour sessions over a 10-day period. Each session consists of a theoretical component (25 minutes approximately) where the wine educator gives information about the grape variety or the regions-of-origin planned for the session.

This is followed by a tasting of three wines (35 minutes approximately) for a total of nine wines per course. Participants are invited to taste the wines on their own and then the floor is opened for discussion between students and the wine educators. The visual, olfactory and gustatory experience of each wine and the relationship to theoretical elements are discussed in the first part of the lecture. These nine wines are identical for all participants, but the order in which the wines are presented differ in relation to the course the participants attend. The selection of the grape varieties takes into account the level of popularity these varieties have in the Asian market. The regions-of-origin are located in different states to make the study more representative of the Australian wine industry, and quality wines from each of the three grape varieties have to be able to be sourced from each region. Table 1 below summarises the way in which the wines are presented to the participants.

Table 1: Organisation of wines for the wine education courses

SESSION	EDUCATION BY GRAPE VARIETY		EDUCATION BY REGIONS-OF-ORIGIN	
	THEORY	TASTING	THEORY	TASTING
1	Pinot Noir	Margaret River Yarra Valley Adelaide Hills	Margaret River	Pinot Noir Cabernet Sauvignon Shiraz
2	Cabernet Sauvignon	Margaret River Yarra Valley Adelaide Hills	Yarra Valley	Pinot Noir Cabernet Sauvignon Shiraz
3	Shiraz	Margaret River Yarra Valley Adelaide Hills	Adelaide Hills	Pinot Noir Cabernet Sauvignon Shiraz

5.3. Sample

A total of 111 participants completed the study over March and April 2013. The socio-demographic profiles of the three groups are not significantly different. All participants are from an Asian country with the most being from China (48%), are mainly 20-24 years old (60%) and moved to Australia less than one year prior to the beginning of the course (59%). Participants are almost equally spread between males and females.

5.4. Results

This section will first provide the results of the continuous variables and then those of the categorical variables.

Figure 1 to Figure 3 present the average values of hedonic liking, WTP, and PPP across the six wines tasted blind before and after the two wine education courses and 21 days apart for the control group.

Education by regions-of-origin generated a significant positive change in overall likeability, WTP and PPP. In particular, the average likeability value across the six wines increased 11% from 5.2/9.0 to 5.8/9.0 ($p=0.001$), which is the highest average score across the three treatments. Similarly, the WTP of the six wines improved 11% from 3.0/5.0 to 3.3/5.0, once again the highest score across the three treatments. Finally, the PPP moved from 2.4/5.0 to 3.2/5.0 ($p= 0.000$), where 2 = "\$9-\$15" and 3 = "\$16-\$20", and 4="\$21-\$25. In this case, the average PPP after the education course is not the highest among the three treatments, as the education by grape variety led to a final value of 3.5/5.0. However, education by regions-of-origin improved the score by 30%, while education by grape variety showed an improvement of only 22% between the two conditions.

Figure 1: Likability – before vs. after wine education

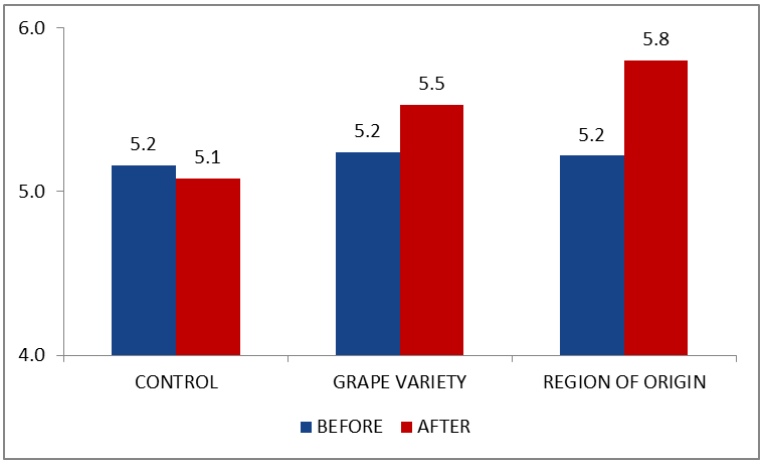


Figure 2: WTP – before vs. after wine education

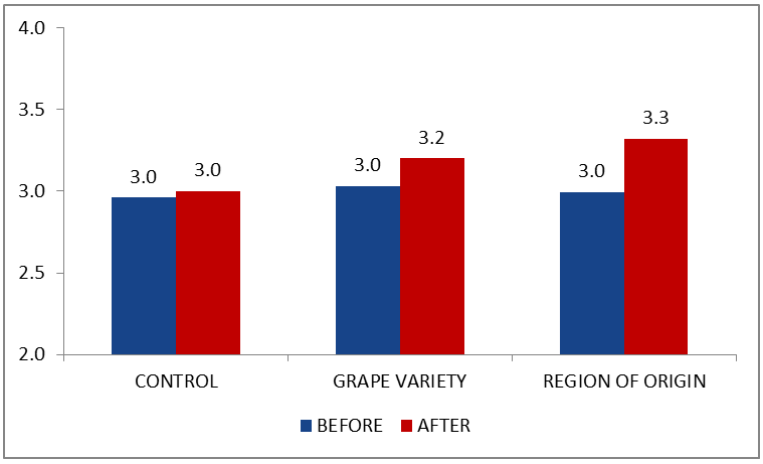
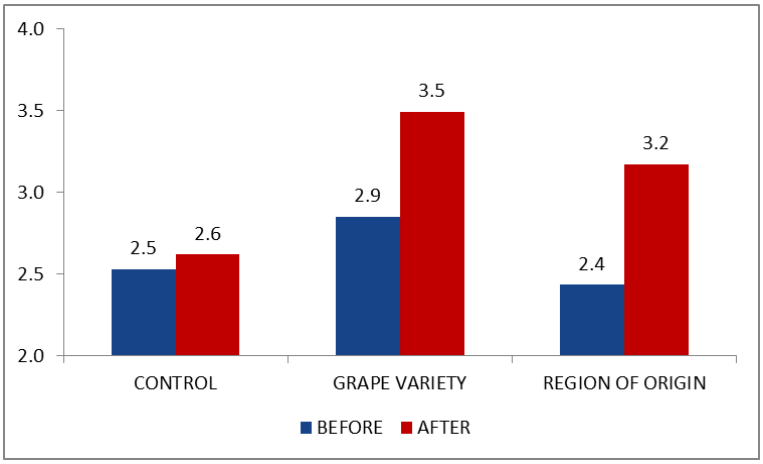


Figure 3: PPP – before vs. after wine education



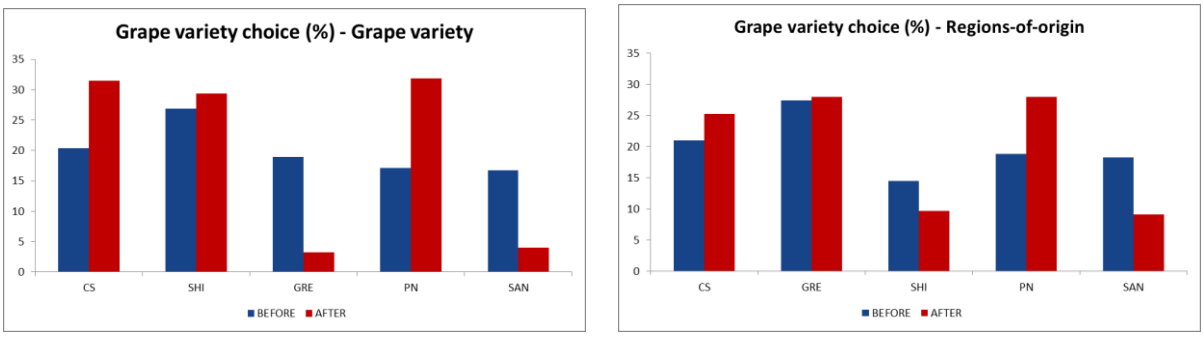
The control group score for likeability remained substantially identical and statistically insignificant between the two sessions (5.1/9.0 and 5.2/9.0, respectively). Similarly, we did not observe any significant change in WTP for the control group (2.96/5.0 and 3.02/5.0 for the first and second evaluations, respectively) or for education by grape variety (3.0/5.0 and 3.2/5.0, respectively). Finally, no significant difference in terms of PPP was registered for the control group (2.5/5.0 and 2.6/5.0).

The results for the categorical variables (see Table 2 and Figure 4) show that an education by grape variety leads to a significant difference in choice of grape varieties and regions-of-origin between the two blind sessions. Participants shifted towards the grape varieties - Pinot Noir, Cabernet Sauvignon and Shiraz – and the regions-of-origin – McLaren Vale and Coonawarra – they learnt more about during the course. No significant changes are shown for the choice of wine style, with a Dark & Oaky style still leading the way followed by a Rich & Bold style. The education based on regions-of-origin only generated a significant change for grape variety. It is believed that the lack of significant changes in terms of regions-of-origin choices between the two evaluations is due to the fact that the regions discussed during the three courses were not represented among the six blind tasted wines. No significant change was recorded for the wine styles. Dark & Oaky and Rich & Bold were the two most selected wine styles. There were no significant differences for the control group between the two sessions.

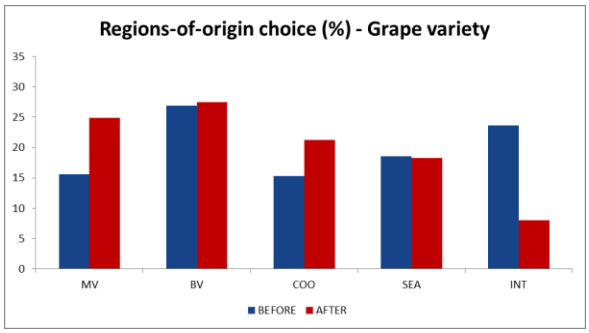
Table 2: p-values of the distributions of choices for the three categorical variables between the two sessions

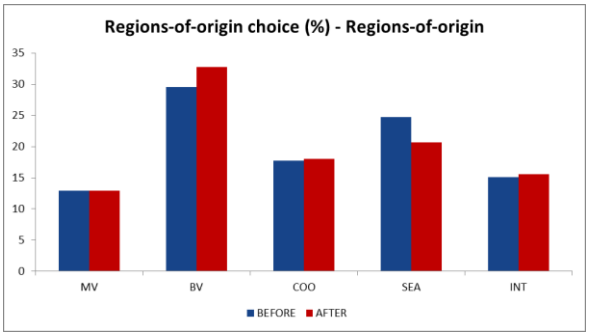
	Control	Grape variety	Regions-of-origin
Grape variety	0.931	0.000	0.021
Regions-of-origin	0.661	0.000	0.661
Wine style	0.881	0.836	0.970

Figure 4: % distribution of choices for the categorical variables

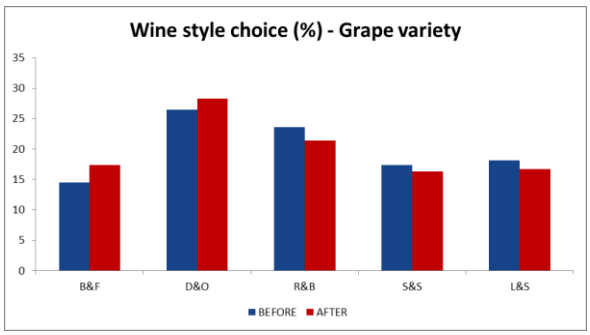


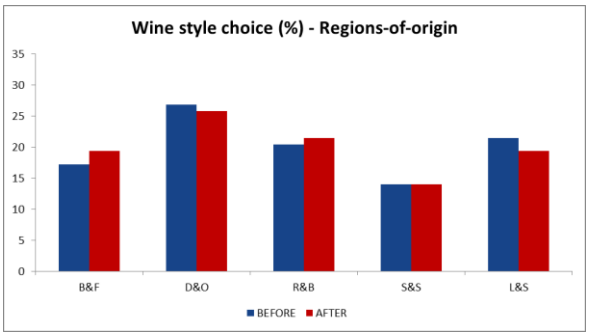
Note: The sessions did not include information about Grenache (GRE), or Sangiovese (SAN). These grape were not included in the questionnaire to act as distractors, and actually see the effects on the grape varieties mentioned during the course (i.e. Cabernet Sauvignon (CS), Shiraz (SHI), and Pinot Noir (PN)).





Note: The sessions did not include information about Barossa Valley (BV), South East Australia (SEA), or Foreign (INT) wines. These regions-of-origin have been included in the questionnaire to act as distractors, and actually see the effects on the regions-of-origin mentioned during the course (i.e. McLaren Vale (MV), and Coonawarra(COO)).





Note: The sessions did not include information about Bright and Fruity (B&F), or Sweet and Spicy (S&S) wine styles. These wine styles have been included in the questionnaire to act as distractors, and actually see the effect on the wine styles mentioned during the course (i.e. Dark & Oaky (D&O), Rich&Bold (R&B), and Light & Savoury (L&S)).

5.5. Discussion and conclusions

Study 1 provides insights into the effectiveness of different structures for wine education classes, which can influence the strategies employed by Wine Australia, Australian wine producers and wine educators in Australia and Asia. Education by regions-of-origin is more effective than one by grape variety and can improve the likeability, WTP and PPP of wines.

However, while an education by grape variety is able to make respondents more consistent in their selection of grape varieties and regions-of-origin, an education by regions-of-origin ensures that respondents are more consistent only in the selection of grape varieties. Therefore, an education based on regions-of-origin can be used to help improve the positioning of Australian wines in the Asian market, where Australia still suffers from the image developed by France. Prior research has shown that higher involvement consumers focus more on regions than grape varieties, or region/grape variety interactions (Perrouty et al. 2006; Lockshin et al., 2006), so this method may also work to increase involvement among participants. This would help all wine producers, as higher involvement buyers spend more money in the category.

6. Study 2

6.1. Introduction

The results of study 1 proved that education based on regions-of-origin is more effective than education by grape variety. This was shown to be true in terms of improving the likeability, WTP and PPP of the wines tasted by novice Asian wine consumers. Another way to influence the way a wine drinker perceives a wine is by the language used to describe it (USA-1201). We now have further refined our educational techniques to investigate the impact of Western versus culture-specific (Asian) tasting terminology and food matching amongst our targeted cohort.

6.2. Method

Study 2 tests if the impact of wine education on increasing the likeability, WTP and PPP of Australian wines differ by using education based on traditional Western descriptors, or by their Chinese equivalent terms. For a detailed description of the research protocol and methodology we refer to study 1. The only change made to the protocol used in study 1 is that all respondents are this time trained using education by regions-of-origin. However, while one group is trained using Western terms and Western food matching suggestions, the other course uses Chinese terms and Asian food matching suggestions. The taste descriptors adopted for the experiment are generated from the outcome of another China-focused AGWA funded project, the aim of which was to understand Chinese sensory preferences for different wine styles and the language used to describe them. The full report for that project is available at http://bit.ly/chineselexiconproject. The food matching suggestions are derived from an exhaustive review of both expert and wine/culinary themed trade publications.

6.3. Sample

The experiment took place in October 2013 with a total of 96 participants, almost equally spread across the three groups. The majority of the sample was aged 20-24 years (69%), is Chinese (45%) or Malaysian (25%), and female (57%). No significant socio-demographic differences are found between groups, apart from a slightly higher presence of females in the control group (71%) compared to the other two treated groups.

To qualify for study 2, participants have to be between 18 and 30 years of age, be born in an Asian country and lived there for at least 10 years. Attendance at all scheduled sessions is a pre-requisite for the participants to receive a gift card as compensation. As in study 1, participants are asked to nominate a preference for a 2-session or 5-session wine program. Those who select the 2-session program only attend two blind tastings 20 days apart, but do not receive any training and are classified as the control group. Those who select the 5-session course attend three wine education training classes between the two blind tastings. The 5-session participants are randomly allocated into two sub-groups, where they are educated using Western or Chinese terms. The classes are run on different days to avoid information transfer between sub-groups, but all sessions are run in exactly the same

between sub-groups, but all sessions are run in exactly the same conditions and time frame to guarantee comparability.

6.4. Results

Figure 5, Figure 6 and Figure 7 present the results on average overall likeability, WTP, and PPP of the six wines tasted blind before and after the course.

An education by Western descriptors generated a significant positive change in overall likeability, WTP and PPP. In particular, the average likeability value across the six wines increased 10% from 5.3/9.0 to 5.8/9.0 (p=0.010), the WTP rose 8% from 3.0/5.0 to 3.3/5.0 (p=0.020), and the PPP increased 35% from 2.6 to 3.5 (p= 0.000), which is interpreted as moving from an average of approximately $16 a bottle to about $21 a bottle.

For all three variables, both the final average score and the percentage increase between the first and the last blind session were the highest recorded across the three groups. The group educated by Chinese terms generated increases of 9% (likeability), 7% (WTP) and 27% (PPP), but only the changes in likeability and PPP were statistically significant. Finally, the values recorded for the three dependent variables for the control groups are all statistically not significant and the changes are all lower than 2%, which clearly demonstrates the effect of training.

Figure 5: Likability – before vs. after wine education

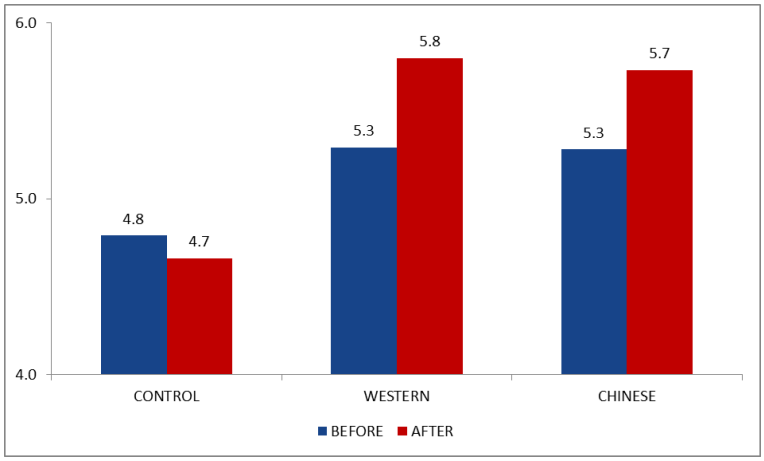


Figure 6: WTP – before vs. after wine education

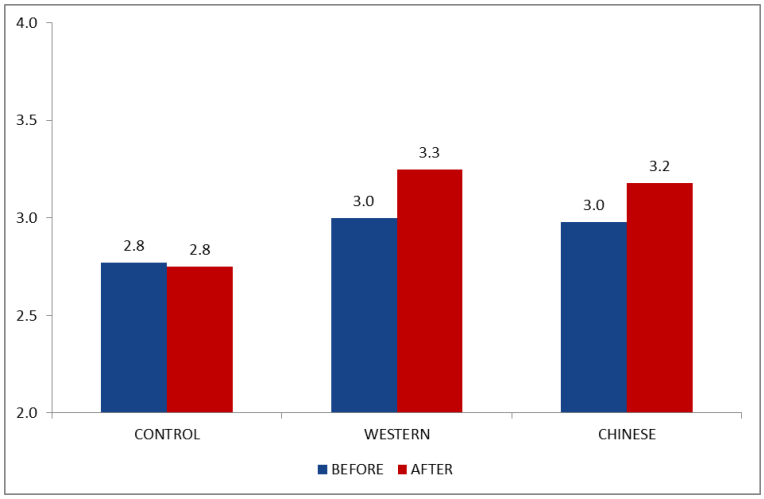
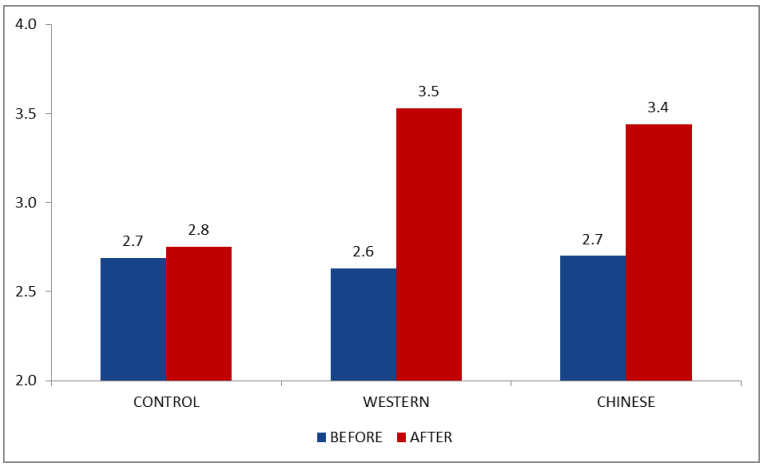


Figure 7: PPP – before vs. after wine education

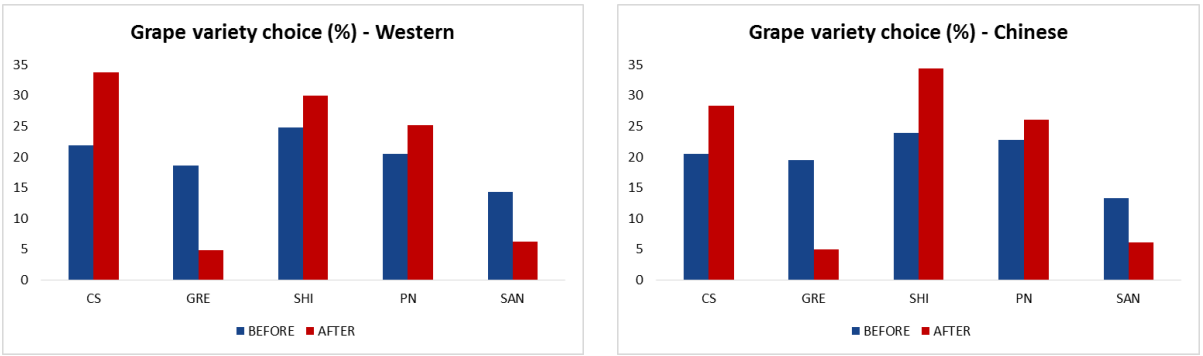


The results for the categorical variables (see Table 3 and Figure 8) show that both educational approaches lead to significant changes in the way grape varieties and regions-of-origin are selected. No significant changes are shown for the choice of wine styles for either the control group or the treated group, with Dark & Oaky still leading the way followed by Light & Sweet. These results are in line with study 1.

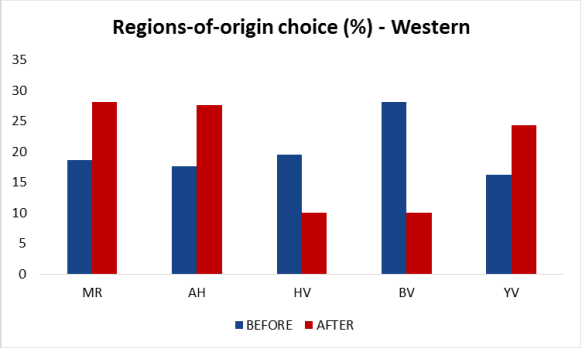
Table 3: p-values of the distributions of choices for the three categorical variables between the two sessions

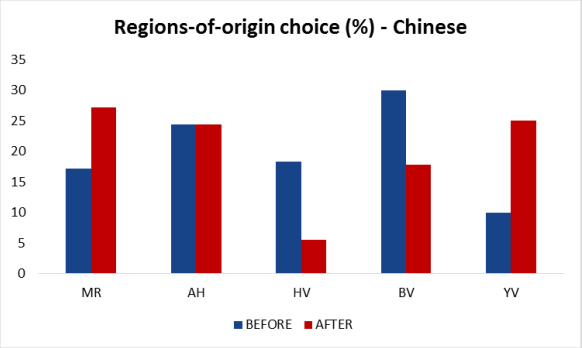
	Control	Western	Chinese
Grape variety	0.813	0.000	0.000
Regions-of-origin	0.556	0.000	0.000
Wine style	0.486	0.841	0.383

Figure 8: % distribution of choices for the categorical variables

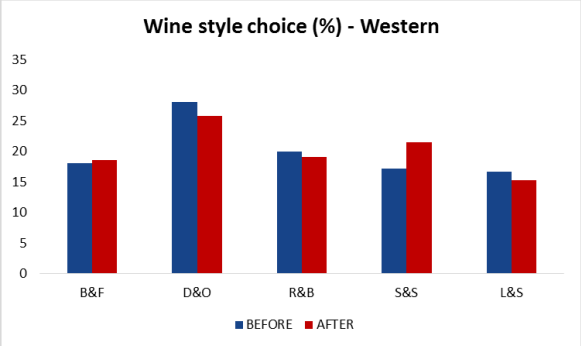


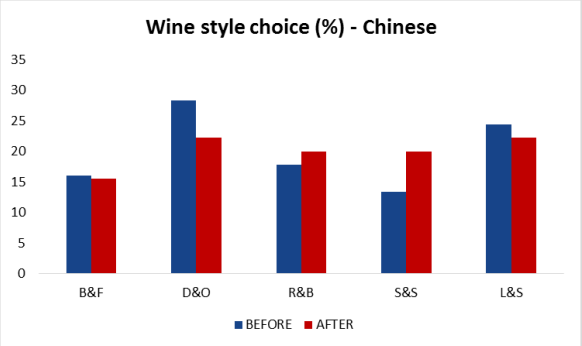
Note: The sessions did not include information about Grenache (GRE), or Sangiovese (SAN). These grape varieties have been included in the questionnaire to act as distractors, and actually see the effects on the grape varieties mentioned during the course (i.e. Cabernet Sauvignon (CS), Shiraz (SHI), and Pinot Noir (PN)).





Note: The sessions did not include information about Barossa Valley (BV), or Hunter Valley (HV) wines. These regions-of-origin have been included in the questionnaire to act as distractors, and actually see the effect on the regions-of-origin mentioned during the course (i.e. Margaret River (MR), Adelaide Hills (AH), and Yarra Valley (YV)).





Note: The sessions did not include information about Bright and Fruity (B&F) or Sweet and Spicy (S&S) wine styles. These wine styles have been included in the questionnaire to act as distractors, and actually see the effect on the wine styles mentioned during the course (i.e. Dark & Oaky (D&O), Rich&Bold (R&B), and Light & Savoury (L&S)).

6.5. Discussion and conclusions

This research program continues to prove at a holistic level that education of any type is effective in increasing a novice wine drinker's likeability, WTP, and PPP of a wine. By the end of study 2 we can affirm that an education by regions-of-origin, using Western terminology and food matching is optimal for wine education of novice Asian wine drinkers in Australia.

The slightly higher effectiveness of education based on Western terminology is not surprising. Despite the respondents being novice Asian wine drinkers, they have lived in Australia for a period of time, been exposed to the culture and come across media and information that discuss wine in a Western context, even if only in very small amounts. We cannot negate its impact. In addition, an educator with a Western background delivered the course in English. The respondents could possibly have experienced some incongruence with the Chinese terminology and food matching due to the mode of delivery. It is important to note that we are not suggesting to 'moth ball' wine education using Chinese terms and food matching, but rather that there is more work to be done in creating culturally congruent education formats. In China, where there is less exposure to Western culture and language and more familiarity with wine in a Chinese context, it is suggested that Australia work to define its engagement with Chinese wine drinkers through its continued culture-specific market development.

7. Study 3

7.1. Introduction

The purpose of study 3 is twofold. First, we want to test the number of sessions necessary for the participants to pick-up on the elements that educators teach them during a course. Secondly, we want to see whether the observed change in participants' preferences hold in the long-term.

In order to reach these objectives, we simultaneously conduct two experiments. The first is the replication of the before/after experiment conducted in both study 1 and 2. The second is a series of Discrete Choice Experiments (DCEs) we administer to participants during each session.

7.2. Method

The reproducibility of the results of study 1 and 2 strengthens the validity of the first experiment, and make sure that no other effects influence the results of study 3 other than the actual effects of the experiment itself. The only difference compared to study 1 and 2 is that all participants taking part in the experiment are educated using the same material delivered in the same order, instead of being split in half as we did in study 1 and 2. More specifically, the education approach we provide to the treated groups is the one structured by region-of-origin and explained with Western terminology. This is due to the fact that these two approaches are the most effective in improving likeability, WTP and PPP in study 1 and study 2 respectively. In order to calibrate the accuracy of the results, we also recruit a group of participants to act as a control. These participants try the six wines in a blind tasting 14 days apart, but they do not receive any education during this time, exactly as we did for the control groups in study 1 and 2.

The DCEs adopted in study 3 are similar to the ones adopted in other AGWA research projects (e.g. USA-0601, USA-0901, and USA-1201). This time we manipulate six product attributes for the creation of hypothetical wines with specific characteristics. These wines are arranged in choice sets. For each choice set, participants have to select the wine they are most likely and least likely to buy for a dinner in a Chinese restaurant with five of their friends to enjoy with the food.

The attributes included in the experiment and their respective levels are:

1) **Regions-of-origin**: Adelaide Hills, Barossa Valley, Hunter Valley, Margaret River, and Yarra Valley
2) **Grape variety**: Cabernet Sauvignon, Grenache, Pinot Noir, Sangiovese, and Shiraz
3) **Price (per bottle)**: AUD 18, AUD 27, AUD 36, AUD 45, and AUD 54
4) **Medal/award**: Present or Absent
5) **Food matching suggestions (grape variety specific)**: Present or Absent
6) **Sensory description of the wines (grape variety specific)**: Present or Absent

The attributes and levels are selected to reflect the content of material presented during the educational session. At the same time we include some attributes and levels we do not discuss in class to act a distractor from the attributes and levels we are actually interested in measuring. In particular, the regions-of-origin and grape varieties selected for the DCE are exactly the same as those used in the main questionnaire, thus allowing us to compare the results of the DCE with the main experiment. Some of the regions (Adelaide Hills, Margaret River, and Yarra Valley) and varieties (Cabernet Sauvignon, Pinot Noir, and Shiraz) are presented in class, while the other regions and varieties are not, thus allowing a distractor task even within some core elements of the education. Food matching suggestions and the sensory descriptions of the wines have been decided after consultation with the members of the research team and other staff of the School of Marketing at the University of South Australia, who are expert in wine descriptions and food matching suggestions. Medals are never mentioned in the wine education sessions, thus they act as a distractor in the DCE. Finally, the prices are selected to reflect a realistic range of prices participants could find at Chinese restaurants, and they can actually afford to buy.

These attributes and levels are combined according to an almost efficient Bayesian Design divided in four blocks of sixteen choice sets each and five alternatives to choose from in each choice set. In order to fit the experiment within a reasonable time frame, and make sure it is possible to measure the changes in choices across the various educational sessions, each respondent is assigned to one of four versions of the DCEs on the first session, and re-assigned to the same version on each subsequent educational event. This means that the members of the control group the DCE three times (before/after/long-term), while the members of the treated group do the DCE six times (before/session 1/session 2/session 3/ after/long-term).

An example of a choice set used in the experiment can be found in Figure 9.

Figure 9: Example of a choice set used in the DCE

Region	*Grape variety*	*It goes well with…*	*Per Bottle ($)*	*MOST*	*LEAST*
Barossa Valley *A dark and oaky Cabernet Sauvignon, earthy on the nose and with a lovely texture, which tastes of blackberry preserve and capsicum*	***Cabernet Sauvignon***		***54***		
Hunter Valley	***Sangiovese***	*Mapo bean curd*	***54***		
Adelaide Hills *A sweet and spicy Grenache, which shows varietal characters on the nose, while the palate displays generous red fruits*	***Grenache***		***27***		
Margaret River *A light and savoury Pinot Noir, with hints of strawberries and cloves, while the palate displays raspberries and red plums*	***Pinot Noir***		***36***		
Yarra Valley	***Shiraz***	*Fried garlic pork chops* 	***18***		

7.3. Sample

The control and the treatment group do not present any statistically significant difference in terms of socio-demographic characteristics. The majority of participants are 20-24 years old (74%), females (66%) and from Malaysia (31%), China (27%), and Hong Kong (13%). The qualification criteria for study 3 are identical to those applied in study 1 and 2. Attendance at all scheduled sessions is a pre-requisite for the participants to receive a gift card as compensation. As in study 1, participants are asked to nominate a preference for a 2-session or 5-session wine program. Those who select the 2-session program only attend two blind tasting 14 days apart, but do not receive any training and are thus classified as the control group. Those who select the 5-session course attend three wine education training classes between the two blind tastings. The 5-session participants are randomly allocated into two sub-groups. However in this experiment all participants are educated with the same approach (education by regions-of-origin and Western terminology. Similarly to study 2 the classes are run on different days to avoid information transfer between sub-groups. Finally, to test the long-term effect of the wine education, both the control and the treated groups are invited to attend a final session in a real Chinese restaurant three weeks after the last session they had attended in class. During this last session, participants are invited to again try the six wines they sampled during the first and last session, and answer the DCE for one last time. We decided to conduct the long-term session in a Chinese restaurant to increase the realism of the scenario we presented to the participants in the DCE.

7.4. Results

7.4.1. Experiment 1

The results of study 3 are in line with the results that emerged in study 1 and 2 (Figure 10, Figure 11, and Figure 12). Both the control group and the treated group started with very similar levels of likeability (M=5.3 – SD=1.8 for the control group and M=5.3 – SD=1.9 for the treated group respectively), WTP (M=3.1 – SD=1.0 and M=3.0 – SD= 1.1), and PPP (M=2.8 – SD=1.1 and M=2.9 – SD=1.1). The control group does not show any statistically significant difference between the *before* and *after* sessions in any of the three dependent variables: likeability (p=0.896), WTP (p=0.661), and PPP (p=0.288). The treated group display statistically significant differences between the *before* and *after* sessions. Likeability rises by 10% from 5.3/9.0 to 5.8/9.0 (p=0.000), WTP rose by 10% from 3.0/50.0 to 3.3/5.0 (p=0.000), and PPP rises by 26% from 2.9/5.0 to 3.6/5.0 (p=0.000). In addition, the scores relative to all three dependent variables are in line with the results of the study 2 group educated with Western terminology and food matching suggestions. This is exactly the same educational approach we adopted in this study, which strengthens the generalisability of the findings.

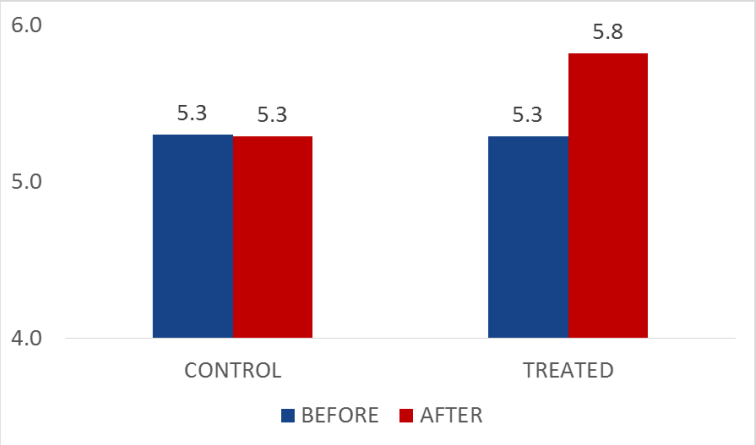


Figure 11: WTP – before vs. after wine education

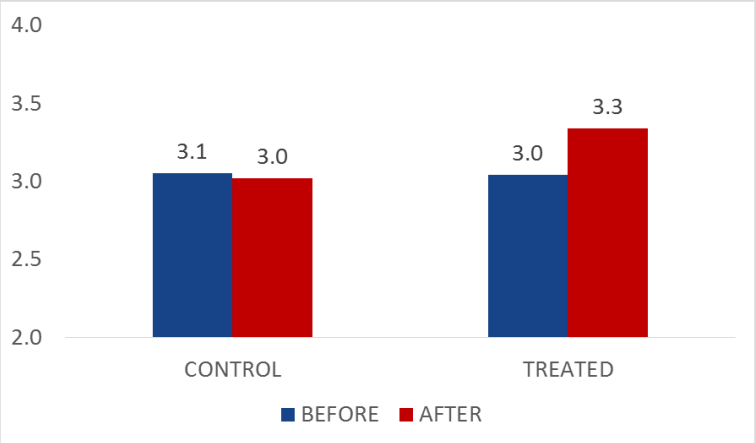
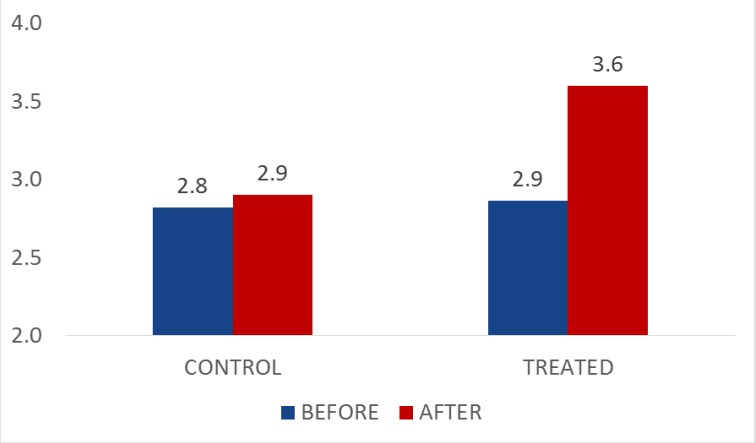


Figure 12: PPP – before vs. after wine education

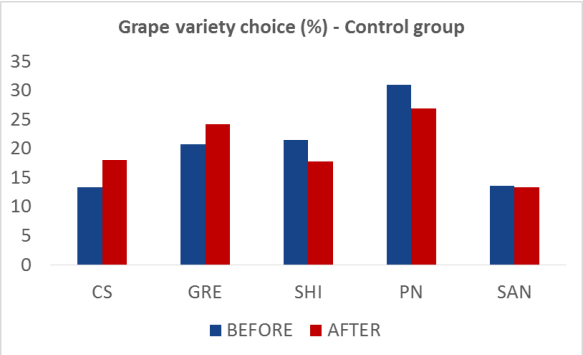


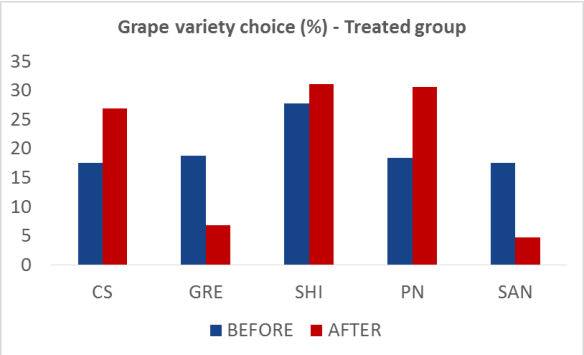
The results for the categorical variables (see Table 4 and Figure 13) show that the treated group significantly changes preference towards the grape varieties and regions-of-origin taught during the course. No significant changes are shown for the choice of wine styles for either the control group or the treated group, with Dark & Oaky still leading the way followed by Rich & Bold. Again, these results are in line with study 1 and 2.

Table 4: p-values of the distributions of choices for the three categorical variables between the two sessions

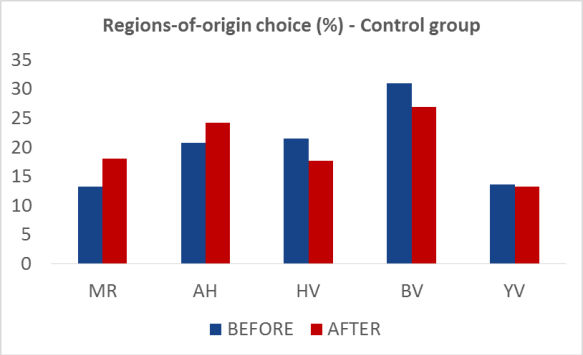
	Control group	Treated group
Grape variety	0.479	0.000
Regions-of-origin	0.308	0.000
Wine style	0.509	0.132

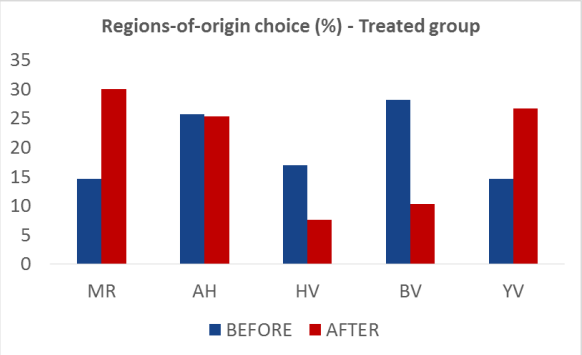
Figure 13: % distribution of choices for the categorical variables



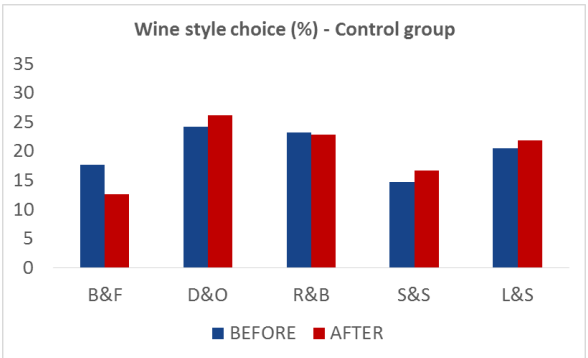


Note: The sessions did not include information about Grenache (GRE) or Sangiovese (SAN). These grape varieties have been included in the questionnaire to act as distractors, and actually see the effects on the grape varieties mentioned during the course (i.e. Cabernet Sauvignon (CS), Shiraz (SHI), and Pinot Noir (PN)).





Note: The sessions did not include information about Barossa Valley (BV), or Hunter Valley (HV) wines. These regions-of-origin have been included in the questionnaire to act as distractors, and actually see the effect on the regions-of-origin mentioned during the course (i.e. Margaret River (MR), Adelaide Hills (AH), and Yarra Valley (YV)).





Note: The sessions did not include information about Bright and Fruity (B&F) or Sweet and Spicy (S&S) wine styles. These wine styles have been included in the questionnaire to act as distractors, and actually see the effect on the wine styles mentioned during the course (i.e. Dark & Oaky (D&O), Rich&Bold (R&B), and Light & Savoury (L&S)).

In conclusion, the results of experiment 1 confirm the outcomes of study 1 and 2, and rule out the possibility that the results of experiment 2 are due to factors other than the experiment itself.

7.4.2. Experiment 2

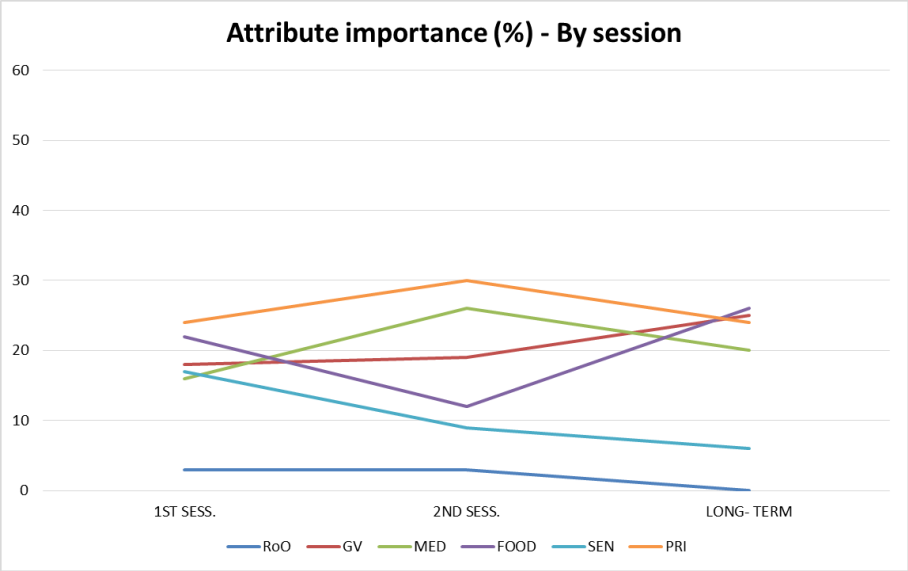
The results of experiment 2 show that education changes the way consumers choose wines, and that this change happens largely after the first wine education session. The tables and figures below show the importance of each attribute across sessions, including in the long-term.

Within the control group, participants do not change the way in which they select wine, with all but sensory descriptions and regions-of-origin having very similar importance scores across all three sessions (see Table 5 and Figure 14). Therefore, without wine education, consumers do not change the way they chose wines.

Table 5: Attribute importance (%) - By session - Control group

	1ST SESS. (n=49)	2ND SESS. (n=49)	LONG-TERM (n=27)
Food matching (FOOD)	22	12	26
Grape variety (GV)	18	19	25
Price (PRI)	24	30	24
Medals (MED)	16	26	20
Sensory descriptions (SEN)	17	9	6
Regions-of-origin (RoO)	3	3	0

Figure 14: Attribute importance (%) - By session - Control group



The results of the treated group reveal a different scenario (see Table 6, Table 7, and Figure 15). Education does indeed change the way in which consumers chose wine. The first-time participants' (i.e. without any wine education) results from the DCE showed that their purchasing is mostly driven by medals (33%), followed by grape variety (19%), sensory descriptions (16%), price (16%), food matching suggestions (14%) and regions-of-origin (2%). After the first session, grape variety becomes the most important choice attribute (49% / +30% compared to first session), followed by price (21% / +5%), medals (18% / -15%), food matching (8% / -6%), sensory description (3% / -16%), and regions-of-origin (1% / -1%).

Attribute importance remains fairly constant after the first session (± 5%, with the exception of grape variety which grew by 4% in session 4 compared to session 3). More importantly, attribute importance in the last session (i.e. long-term), run three weeks after session 5, remains in line with session 2 values.

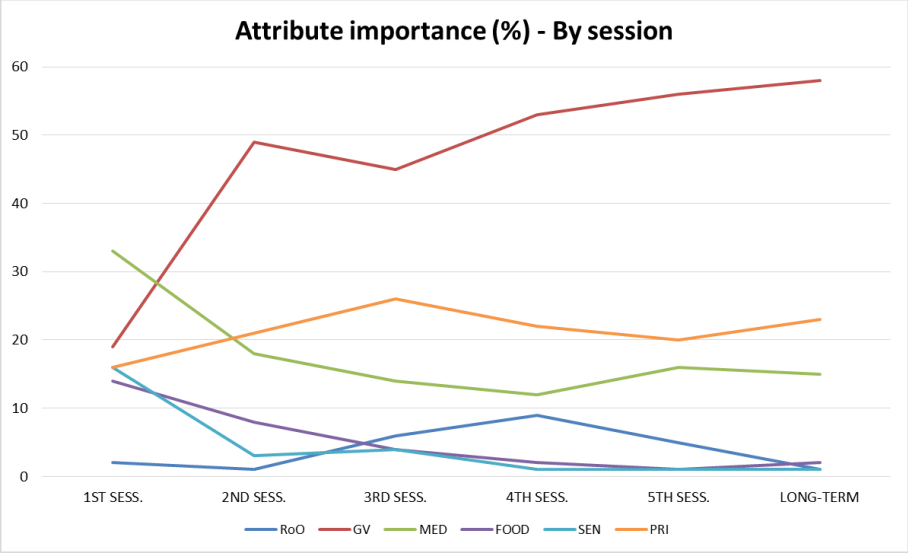
Table 6: Attribute importance (%) - By session – Treated group

	1ST SESS. (n=96)	2ND SESS. (n=96)	3RD SESS. (n=96)	4TH SESS. (n=96)	5TH SESS. (n=96)	LONG-TERM (n=61)
Grape variety (GV)	19	49	45	53	56	58
Price (PRI)	16	21	26	22	20	23
Medals (MED)	33	18	14	12	16	15
Food matching (FOOD)	14	8	4	2	1	2
Sensory descriptions (SEN)	16	3	4	1	1	1
Regions-of-origin (RoO)	2	1	6	9	5	1

Table 7: Changes in attributes' importance across sessions (%)

	Diff 2nd - 1st	Diff 3rd - 2nd	Diff 4th - 3rd	Diff 5th - 4th	Diff LT - 5th
Grape variety (GV)	30	- 4	8	3	2
Price (PRI)	5	- 5	4	2	3
Medals (MED)	15	- 4	2	4	1
Food matching (FOOD)	6	- 4	2	1	1
Sensory descriptions (SEN)	13	- 1	3	0	0
Regions-of-origin (RoO)	1	- 5	3	4	4

Figure 15: Attribute importance (%) - By session – Treated group



7.5. Discussion and conclusions

The fact that grape variety becomes the most important attribute for participants when selecting wine may sound confusing to some given that participants have been exposed to an education based on regions-of-origin. However, educating consumers based on regions-of-origin means that during every given education session participants are presented with a certain regions-of-origin, but three grape varieties. As the education progresses, participants are exposed to a different region, and different wines, but the same three grape varieties (Cabernet Sauvignon, Pinot Noir, and Shiraz. Therefore, a reinforcement effect occurs, which lead grape variety to become the most important choice factor as a result of an education based on regions-of-origin.

The other interesting result is that elements not mentioned during the education session, such as medals, progressively decline in importance. This is an important outcome of the research, as several studies revealed how important medals or awards are for the selection of a wine (Lockshin et al., 2006; Atkin et al. 2007; Goodman, 2009; Corsi et al., 2012. However, these studies have not been replicated and did not focus on the role education plays in changing consumer preferences. The results of this experiment show that when educated on elements other than medals or awards, consumers rely less on these cues for the selection of the wines, and prefer to focus on other intrinsic product elements.

In conclusion, the results of Experiment 2 suggest that a one-off education session (e.g. masterclasses will be a more time-effective way to change consumers' choice towards the content taught during the education. In addition, running a one-off education session is cheaper than running a 5-session program, and the results of this experiment suggest that one-off education sessions represent a cost-effective way to shift consumer preferences. However, we cannot say that a one-off education session would have the same long-term effect as longer education sessions. This is because, although the results show that the marginal changes after the first session are minimal, we cannot completely rule out the hypothesis of a reinforcement effect due to the multiple exposures participants have to the educational material.

8. Project outcome and conclusions

8.1. Project performance against planned output

The following tables list performance targets as outlined in the project contract and later contract amendments.

Outputs and Activities 2011–12

	Output	Activities	Performance
a	Start club	Hire part time student, produce merchandising (logo, cards, posters, leaflets etc.)	Completed
		Buy glasses, spittoons and paper towels	Completed
		Create questionnaire	Completed
		Press release	Completed – An article on the wine club project appeared on the "The Advertiser" on the 28/08/12
b	Bring wine educators to UniSA for a wine masterclass	Organise a wine master class at UniSA	Arranged to have Mrs. Ava Huang and Mr. Micheal House deliver an introductory lecture about wine tasting.
c	Club events	Plan 9 wine events at City West Campus (Sept-Nov; Feb-June)	We only managed to run 5 out of 9 planned sessions, as we could not recruit enough students to run 9 classes.
		Organise wineries and speakers	All wines and speakers have been organised.
		Organise experiments	The experiment was run, but the results could not be utilised for reporting due to the low number of participants recruited.

Outputs and Activities 2012–13

	Output	Activities	Performance
a	Report on first year data	Collect and analyse questionnaires (in situ and on line)	The experiment was run, but the results could not be utilised for reporting due to the low number of participants recruited.
b	Initial set of 3 waves of experiment	Comparing presentation of wines using region compared to grape variety	The findings showed that the education by regions-of-origin is more effective than the one by grape variety and can improve the likeability, WTP and PPP of wines.

		Organise wineries and speakers	All wines have been organised and speakers delivered the classes according to the expected deadlines.
	Plan and deliver experiments.	Organise experiments	The experiment has been organised and executed according to the expected deadlines.

Outputs and Activities 2013–14

	Output	Activities	Performance
a	Report on first experiment	Collect and analyse questionnaires (in situ and on line).	The results of wave 1 of data collection have been published via a conference paper and a trade article (see publication list for more details).
b	Plan second wave of experiments	Based on which works better (region or grape variety) use this to understand how an education based on Western terminology works in comparison to an education based on Chinese terminology; both to include wine tastings	By the end of study 2 we can affirm that an education by regions-of-origin, using Western terminology and food matching is optimal for wine education of novice Asian wine drinkers in Australia.
c	Plan and deliver experiments.	Organise wineries and speakers	All wines have been organised and speakers delivered to the classes according to the expected deadlines.
		Organise experiments	The experiment has been organised and executed according to the expected deadlines.
d	Report on second experiment	Collect and analyse questionnaires (in situ and on line).	The results of study 2 have been published via a conference paper and a trade article (see publication list for more details).
		Publish results on the website	Study 2 results have not been published on the UniSA website, but they have been published on the websites of the *Pangborn Conference*, and the *Wine & Viticulture Journal*.
	Disseminate knowledge on project results	Produce trade magazine articles	Completed (see above)
		Press release	No press release has been written about study 2 results. Instead we wrote a conference paper and industry publication to disseminate the results.
		Write one conference paper	Completed (See above)

Outputs and Activities 2014–15

	Output	Activities	Performance
a	Third set of 3 waves of experiment	Test the number of education sessions necessary to elicit an increase in preference towards the content of the education sessions and its long-term effects	The results of study 3 - experiment 1 confirms the outcomes of study 1 and 2, and rules out the possibility that the results of experiment 2 are due to other factors than the experiment itself. The results of study 3 - experiment 2 suggests that one-off education session (e.g. master classes) will be a more time-effective way to change consumers' choice towards the content taught during the education.
b	Plan and deliver experiments.	Organise wines and speakers. Deliver results of the experiment	All wines have been organised and speakers delivered to the classes according to the expected deadlines.
c	Disseminate knowledge on project results	Publish results on the website	The results of study 3 have not been published yet on any website.
		Produce trade magazine articles	The researchers will start writing a trade magazine article about study 3 results at the beginning of 2016.
		Press release	No press release has been written yet about study 3 results.
		Write one conference paper	The researchers will start writing an academic paper about study 3 results at the beginning of 2016.
		Write two scientific articles (target: B or A journals)	The researchers are currently writing academic papers from this research project, and they will soon be sent to an A level academic journal for consideration.

8.2. Benefits from the project

8.2.1. Economic benefits

A long-term wine education course in a foreign country like China could be expensive, particularly if the content of the education sessions was delivered in a sub-optimal way. The results of the project will allow AGWA to provide shorter, yet more efficient, wine education courses. These courses could cost less, as educators need to be involved a minimal number of times. Alternatively if the number of face-to-face sessions is kept constant, more people in more cities will be able to receive a wine education.

8.2.2. Environmental benefits

There are no direct environmental benefits of this research beyond a more efficient use of resources to develop and satisfy Asian wine markets. However, this project offers some indirect environmental advantages. If one considers the carbon footprint of any good exported to Asia, one can see that knowing the preferences of consumers before sending a good overseas will reduce the chances of an unsuccessful shipment, with a definite benefit for the environment.

8.2.3. Social benefits

The key social benefit is a greater understanding of the Australian wine sector by Asian students and perhaps a greater consideration of Asian people by wineries involved in the program. Moreover, the club will promote a socially responsible consumption of wine, thus strengthening the efforts already put in place by AGWA, as well as other Australian governmental bodies. This interaction benefits both Australian and Asian people by the camaraderie developed in these informal wine education classes.

9. Recommendations

This series of experiments showed the value of educating young and novice Asian consumers about Australian wine while they are studying in Australia. A simple set of three one-hour classes improved the students' overall interest in wine, willingness to purchase, and raised the price they are willing to pay. Just as important, the third experiment showed that most of the effect of the wine education class occurs in the first session. Thus, we would recommend:

1. Wine Australia develop simple wine training courses based on regions-of-origin for use in Asia. These might have a single session with only one region, or multiple sessions with a different region in each session. Our research showed that by focusing on only a few major grape varieties in each session, preferences for those varieties remained strong over several weeks after the final session. Therefore, we recommend short (one-hour) seminars with limited varieties and only one region at a time.

2. We also found it was hard to engage the students for more than one session without some sort of reward (in this case a gift card). We recommend that Wine Australia focuses on single sessions for younger and less involved wine drinkers in Asia, and perhaps develop multiple or longer sessions for more involved wine consumers.

3. Wine Australia should trial Chinese flavour descriptors in China as well as Western descriptors, before deciding which works better. The Western descriptors worked better in Australia, but the two types have not been compared in China, especially with younger and wine-naïve wine drinkers. It may be that Chinese terms work better with local Chinese, who have not been exposed to Western wine descriptors.

Appendix 1 – Communication

The following table lists all project related communications ordered by time. The first column indicates those communications enclosed in the final report.

	Type	Topic	Audience	Location	Date
	Trade magazine paper	Optimising the impact of wine education on Asian international students	AGWA, Wine Australia, Business & Trade	Wine & Viticulture Journal, Vol. 28 No. 5, pp. 83-85.	01/09/13
	Conference paper & presentation	Optimising the impact of wine education on Asian international students	Marketing scientists	Paper presented at the 8th International Conference of the Academy of Wine Business Research, Geisenheim, Germany,	29/06/14
	Trade magazine paper	Optimising the impact of wine education on Asian consumers: Training with Western or Chinese terminology	AGWA, Wine Australia, Business & Trade	Wine and Viticulture Journal, Vol. 30 No. 3, pp. 68-69.	01/05/15
	Conference paper & presentation	Optimising the impact of education techniques on novice Asian wine drinkers	Marketing scientists	Poster presentation at the 11th Pangborn Sensory Science Symposium, Göteborg, Sweden.	26/08/15

Copy of published communications

Articles

1) Corsi, A. M., Cohen, J., and Lockshin, L. (2013), 'Optimising the impact of wine education on Asian international students', *Wine & Viticulture Journal*, Vol. 28 No. 5, pp. 83-85.
2) Corsi, A. M., Cohen, J., and Lockshin, L. (2014), 'Optimising the impact of wine education on Asian international students', Paper presented at the 8th International Conference of the Academy of Wine Business Research, Geisenheim, Germany, 28th-30th June.

3) Corsi, A. M., Cohen, J., and Lockshin, L. (2015), 'Optimising the impact of wine education on Asian consumers: training with Western or Chinese terminology', *Wine and Viticulture Journal*, Vol. 30 No. 3, pp. 68-69.

4) Corsi, A. M., Cohen, J., and Lockshin, L. (2015), 'Optimising the impact of education techniques on novice Asian wine drinkers', Poster presentation at the 11th Pangborn Sensory Science Symposium, Göteborg, Sweden, 23rd-27th August.

Appendix 2 – IP statement

There is no specific intellectual property developed from this research project.

All the methods developed were based on publicly available research in economics and marketing. The combinations used in this research were new, but all methods are provided in published articles.

Appendix 3 – References

Anderson, K. (2009), "Terroir rising? Varietal and quality distinctiveness of Australia's wine regions", Working Paper Series no. 77, The University of Adelaide, available at http://www.economics.adelaide.edu.au/research/papers/doc/wp2009-18.pdf

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Sagala, R. (2013), "The impact of general public wine education courses on consumers perception", AAWE Working Paper No. 132, available at http://www.wine-economics.org/aawe/wp-content/uploads/2013/02/AAWE_WP132.pdf

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The Times (2013), “Australia’s drive for international students”, available at: http://www.timeshighereducation.co.uk/comment/columnists/australias-drive-for-international-students/2002507.article

Appendix 4 – Staff List

The following people were involved in the project:

Ehrenberg-Bass Institute for Marketing Science – University of South Australia

- Dr. Armando Maria Corsi
- Dr. Justin Cohen
- Prof. Larry Lockshin

Appendix 5 – Budget reconciliation

End of project financial statement completed online on CIMS.