

## Optimising the impact of wine education on Asian international students

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### Abstract

*Purpose:* The research compared two ways of categorising wines, either by region or grape variety, for teaching wine appreciation to Asian students to find which worked better.

*Design/methodology/approach:* Three similar groups of Asian students at a major Australian university tasted a set of six wines blind and rated them for liking, willingness to purchase, perceived price point, as well as choosing the grape variety, wine region, and wine style from a series of wine choices. One group was then exposed to three sessions of wine appreciation organised by grape variety; one group had the same course and wines organised by wine region; and the third group (the control) had no course. All three groups then tasted the same six wines blind and made the same ratings and choices.

*Findings:* The students trained using region of origin had significantly greater improvement in ratings for liking, willingness to purchase and perceived price compared to the other two groups. Students trained using region of origin and grape variety also improved their picking of grape variety in the blind test. There was no difference among the groups in choice of wine style after the treatments or compared to the control group.

*Practical implications:* This research shows that organising the wines by region of origin provides better results for the Australian wine sector: increases in willingness to pay, liking and perceived price point. Australian wine courses, especially in Asia, should organise wines by region of origin. Other countries and target markets should be examined.

Key words: wine appreciation, wine training, Asia

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## **1. Introduction and literature review**

Asia is on the radar of most wine industry professionals. However, many new world producers, Australia included, suffer at the expense of the strong perception of French wine in Asia and in particular, China. Education is a core component of the Australian economy. Eighty percent 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 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 such that one might 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, only a couple of papers dealt with this issue, but none in Australia. LaTour et al. (2011) showed that when novice consumers were exposed to a conceptual type of training (e.g. explanation about how the wine is produced and discussion about wine varietals), they were better able to identify wines previously tried and they were less influenced by fictitious advertising. In addition, these consumers thought the wine was of higher quality and they were willing to pay a higher price for it. Another study by Sagala (2013), a Canadian wine educator, showed that participation in a wine course led to an increase in perceived subjective knowledge, the importance of varietal and regional attributes, and the willingness to talk about wine.

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

In this base study, the authors tested whether education based on regions of origin or based on grape varieties improves the likeability, willingness to pay and perceived price points for a series of red wines tasted blind. This research represents the first of a series of four studies funded by the Grape and Wine Research and Development Corporation (GWRDC) to understand how to better educate Asian students about Australian wines. However, the outcomes should aid the development of wine education courses in general.

## **2. Method and sample**

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; 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 obvious as they represent 85% of Australian exports to China.

For the second part of the method, a convenience sample of university students living in the Adelaide metropolitan area was recruited via different social media platforms to take part in the experiment. In order to quality for participation, students had to be between 18 and 30 years old, be born in an Asian country and lived there for at least ten years. The students had to attend all the scheduled sessions in order to receive a gift card as compensation for their time.

**Dependent variables:** All the students participated in a central location hedonic test in Adelaide. Each participant evaluated all six wines, which are representative of the main styles of red wines available in Australia and potentially able to be exported to Asia. The wines were characterised by the AWRI sensory descriptive panel, and are 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 were presented monadically using a balanced randomised presentation order across respondents with three-digit coded ISO standard wine glasses. Each glass contained 30 ml of wine. Participants were advised to rest between the wines and drink some water. Assessments were made on paper with an individual questionnaire presented for each wine. The participants rated each wine on two sets of variables, continuous and categorical:

- Continuous:
  - overall liking on a nine-point hedonic scale ('dislike extremely' to 'like extremely');
  - willingness to purchase on a five-point Likert scale ('definitely would not purchase' to 'definitely would purchase');
  - perceived price point on a five-point Likert scale ('\$8 or below' to 'over \$25').
- Categorical:
  - grape variety (choice among five different grape varieties)
  - region (choice among five different wine producing regions)
  - wine style (choice among five different wine styles, from 'light and sweet' to 'dark and oaky')

Three groups of participants attended the central location hedonic test. Two groups took part in a wine education course between the two blind tasting sessions, while the control group didn't receive any training.

**Independent variables:** the students who took part in the education courses were 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 region of origin (Perrouy et al., 2006; Remaud and Lockshin, 2009; Bruwer and Johnson, 2010). These two approaches have been 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 was comprised of three one-hour sessions over a 10 day period. Each session consisted of a theoretical component (25 minutes approximately) where the wine educator gave information about the grape variety or the region of origin planned for the session.

This was followed by a tasting of three wines (35 minutes approximately) for a total of nine wines per course. The students were invited to taste the wines on their own and then the floor was open for discussion between students and the wine educators about the visual, olfactory and tasting characteristics of each wine and the relationships with the elements of theory discussed in the first part of the lecture. These nine wines were identical for all students, but the order in which the wines were presented differed in relation to the course the students attended. The selection of the grape varieties took into account the level of popularity these varieties have in the Asian market. The regions of origin were 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 had to be able to be sourced from each region. Table 1 below summarises the way in which the wines were presented to the participants.

**Table 1: Organisation of wines for the wine education courses**

SESSION	EDUCATION BY GRAPE VARIETY		EDUCATION BY REGION 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

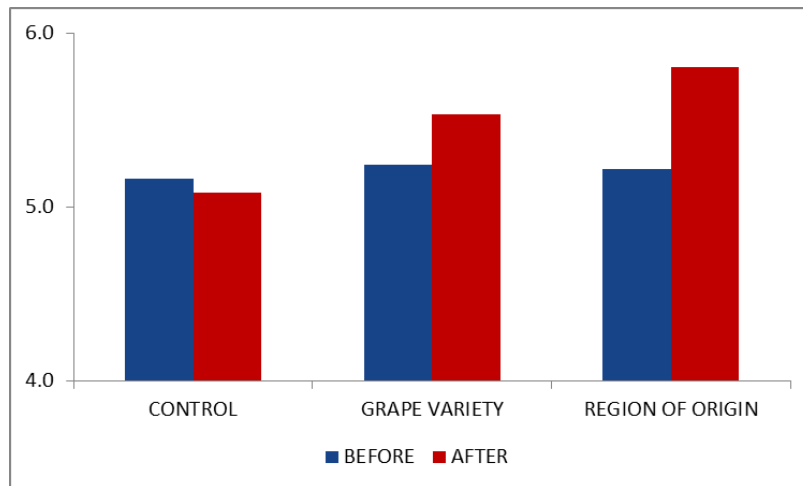
A total of 111 students took part in the study. The socio-demographic profiles of the three groups were not significantly different. All students came from an Asian country with a prevalence for China (48%), they were mostly 20-24 years old (60%), and they moved to Australia less than six months prior to the beginning of the course (29%). The students are almost equally spread between males and females.

### 3. Results

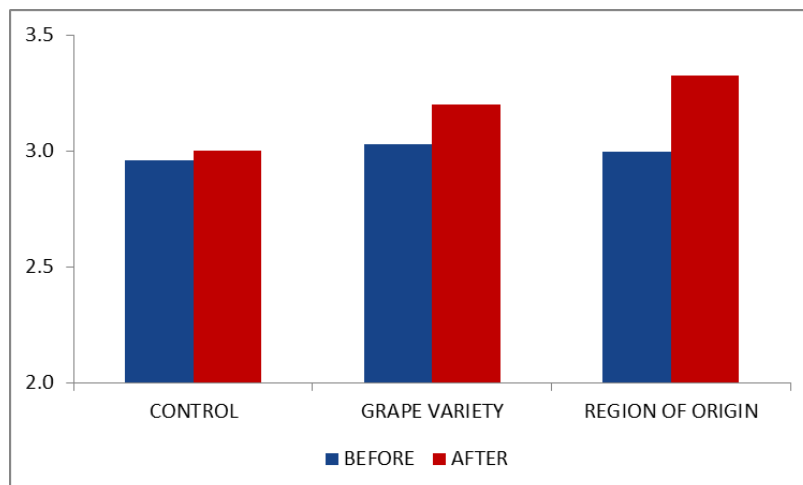
This section will first provide the results of the continuous variables and then those of the categorical variables. Figure 1 to Figure 3 present the average values of hedonic liking, willingness to purchase, and perceived price points across the six wines tasted blind before and after the two wine education courses and 21 days apart for the control group.

Education by region of origin generated a significant positive change in overall likeability, willingness to purchase and perceived price point. In particular, the average likeability value across the six wines increased by 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 willingness to purchase the six wines improved by 11% from 3.0/5.0 to 3.3/5.0, once again the highest score across the three treatments. Finally, the perceived price point moved from 2.4 to 3.2 ( $p=0.000$ ), where 2 = “\$9-\$15” and 3 = “\$16-\$20”, and 4=”\$21-\$25. In this case, the average perceived price point after the education course is not the highest among the three treatments, as the education by grape variety led to a final value of 3.4/5.0. However, education by region of origin improved the score by 30%, while education by grape variety showed an improvement of only 22% between the two conditions.

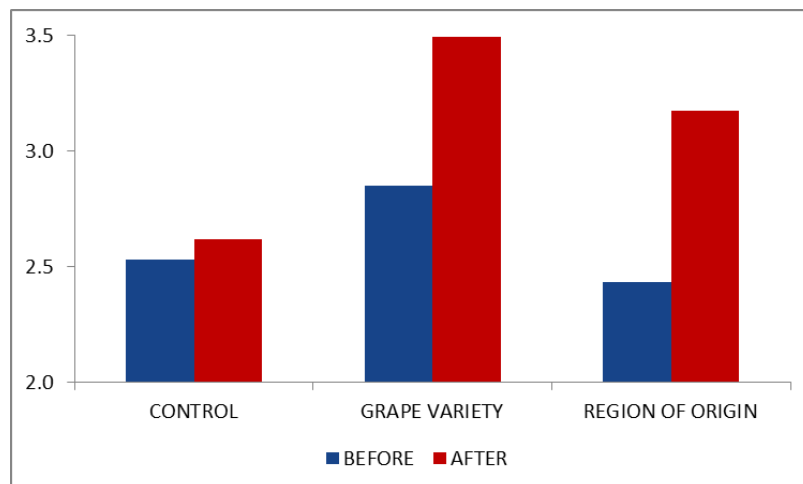
**Figure 1: Likability – before vs. after wine education**



**Figure 2: Willingness to purchase – before vs. after wine education**



**Figure 3: Perceived price point – before vs. after wine education**



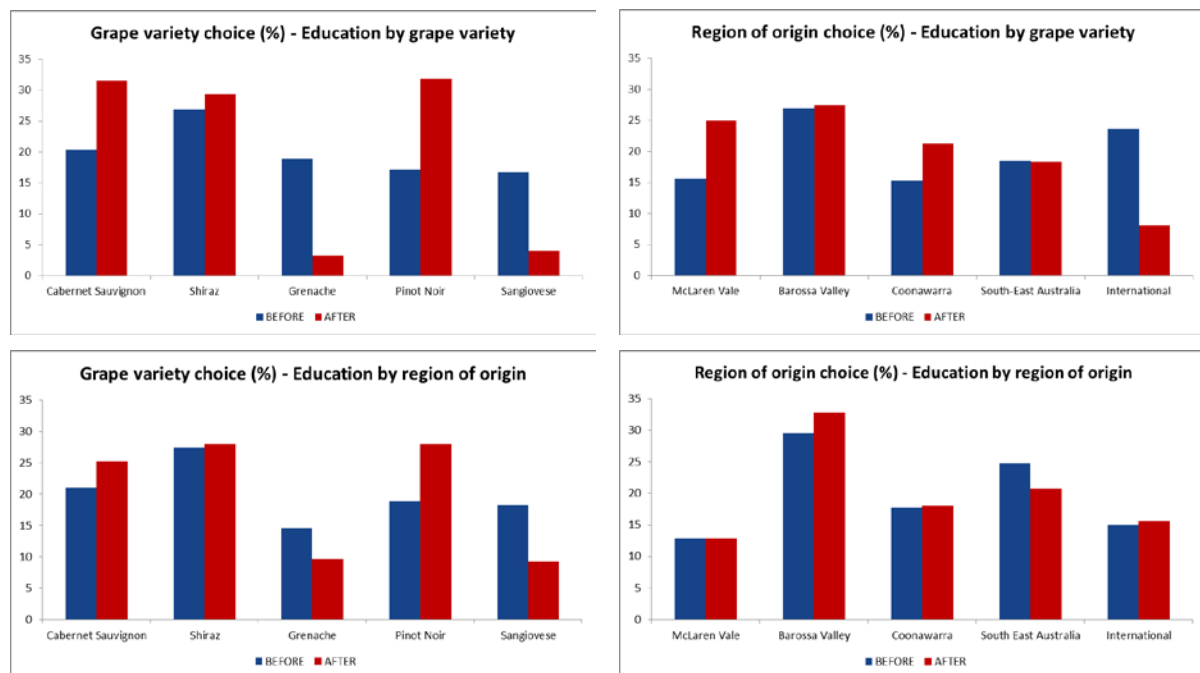
The control group score for likeability remained substantially identical and statistically insignificant between the two sessions (5.1/9.0 and 5.2/9.0, respectively). Similarly, we didn't observe any significant change in willingness to purchase for the control group (2.96/5.0 and 3.02/5.0 for the first 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 perceived price point 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 education by grape variety leads to a significant difference in choice of grape varieties and regions of origin between the two sessions. Participants shifted towards the grape varieties - Pinot Noir, Cabernet Sauvignon and Shiraz – and regions of origin – McLaren Vale and Coonawarra – as they learnt more during the course. No significant changes are shown for the choice of wine style, with a dark & oaky still leading the way followed by rich & bold. 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	Education by grape variety	Education by region of origin
Grape variety	0.931	0.000	0.021
Region 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**



#### 4. Discussion and conclusions

This study provides insights into the effectiveness of different structures for wine education classes, which should influence the strategies employed by Wine Australia, Australian wine producers and wine educators in Australia and Asia. Findings of this first phase of research demonstrate that education by region of origin is more effective than by grape variety and can improve the likeability, willingness to purchase and perceived price points of wines.

However, while an education by grape variety is able to make respondents more consistent in the selection of grape varieties and regions of origin, an education by regions of origin make respondents more consistent only in the selection of grape varieties. These elements are beneficial for 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 (Perrouy et al. 2006; Lockshin et al., 2006), so this method may also work to increase involvement among the students. This would help all wine producers, as higher involvement buyers spend more money in the category.

Of course this is an initial study with three groups of students in one wine appreciation course. Further research should extend this research to show whether the effect works for wines from other countries and for other cohorts of wine appreciation students. It may be that the results stem from the way information is organised in the brain and that further improvements in the outcomes of wine appreciation training can be developed by understanding how information is coded and added to existing mental networks.

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