

# Nga Tamariki o Te Kupenga

*Understanding the diversity of Māori Students*

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20 June 2019



# The State's view of Māori identity

Māori

(Please leave the pen)

# In fact, the reality is more like this...



A portrait of Tolaga Bay in 1980  
John Walsh



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Construct a dataset linking Te Kupenga and Ministry of Education student and school data



Use Exploratory Factor Analysis to reduce the cultural measures in Te Kupenga to a more manageable set of domains of Māori culture



Apply a clustering methodology to these domains to create profiles of different parts of the Māori population

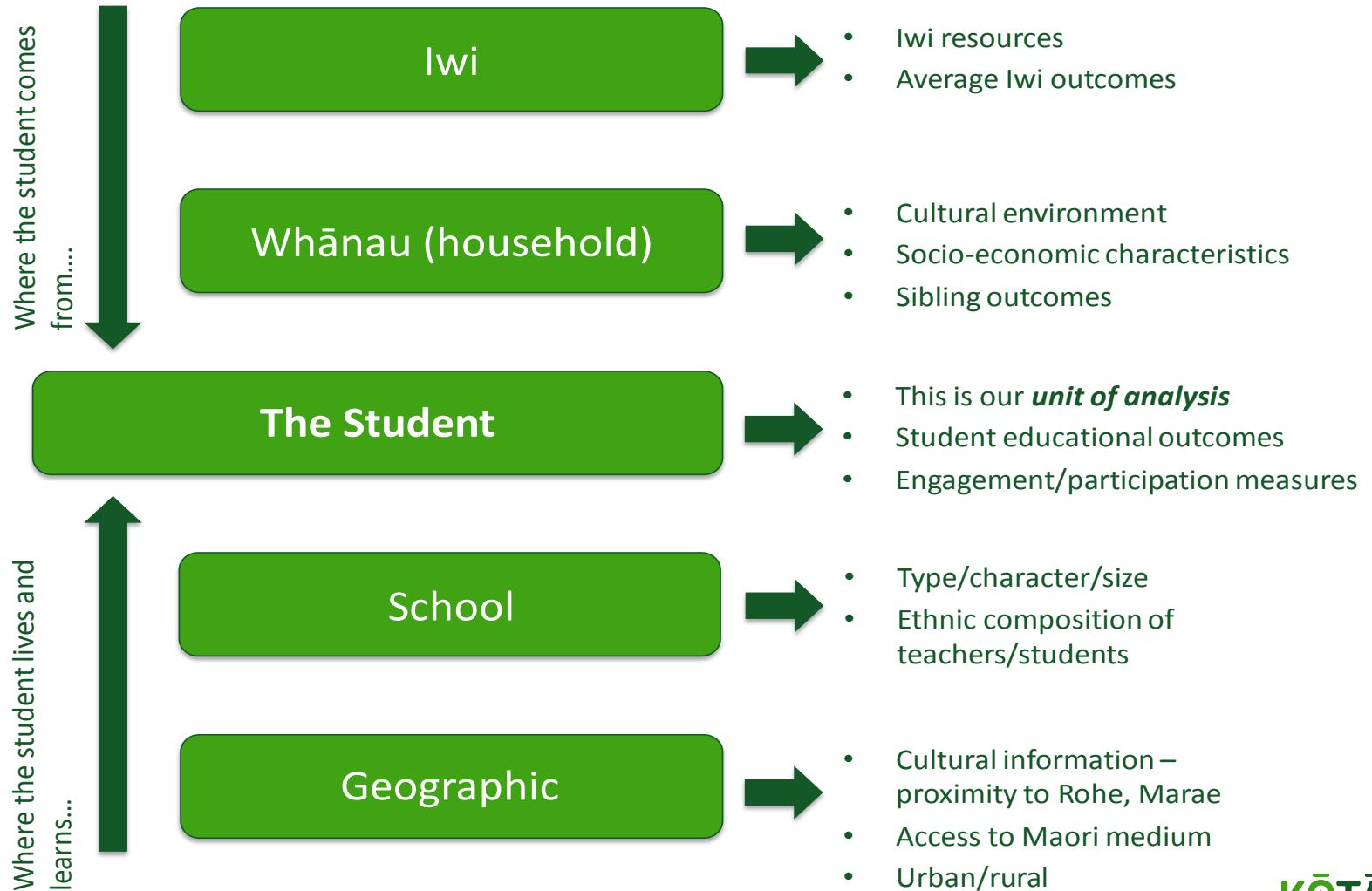


Use these profiles to investigate the relationship between Māori cultural identity and school outcomes

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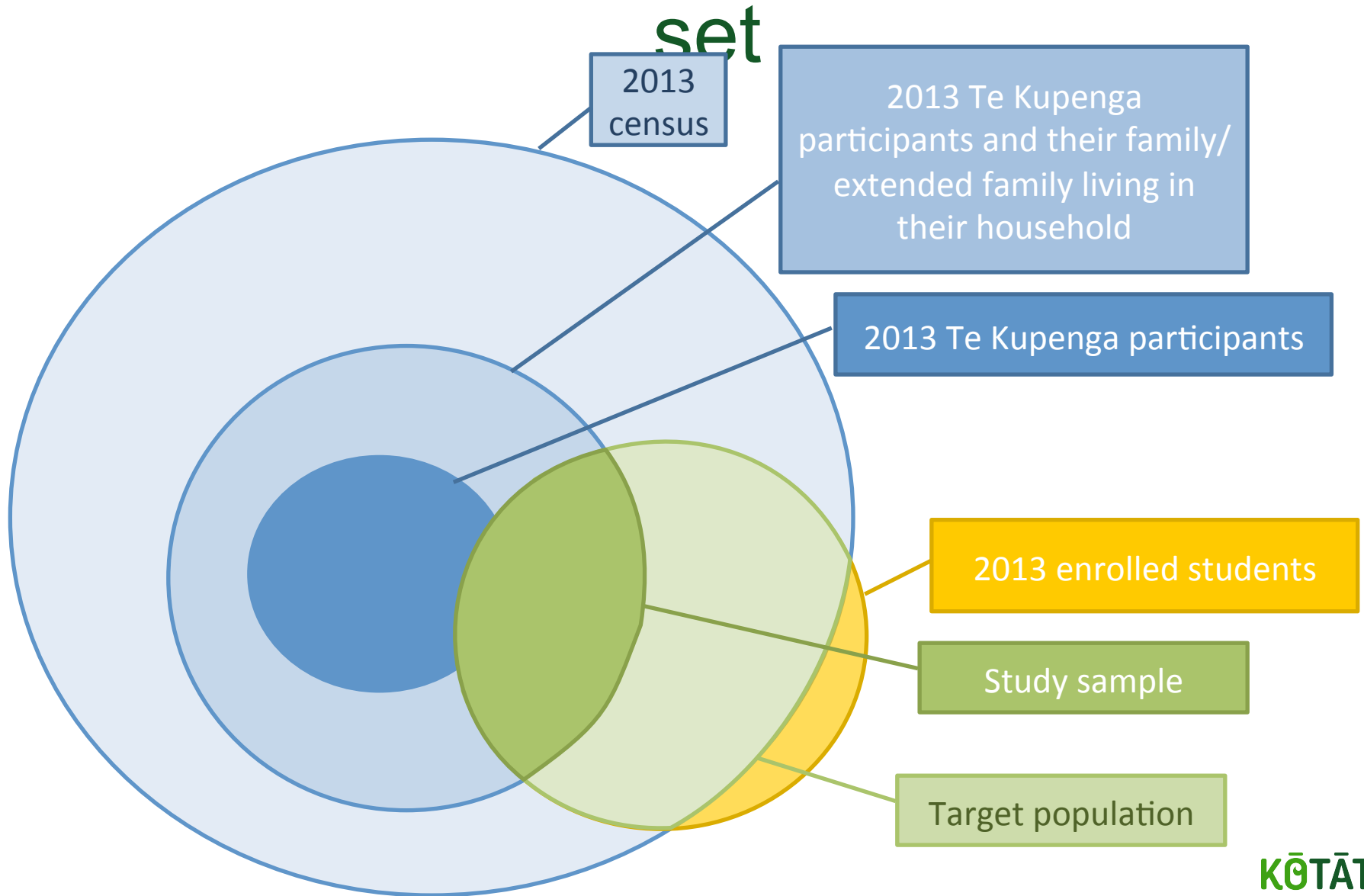
# Nga Tamariki o Te Kupenga data map



# Nga Tamariki o Te Kupenga data set

- 2013 Te Kupenga participants are the starting point
- Add all family or extended family members living in the same household from the Census
- Link with the MoE administrative data to select two Māori student populations:
  - Students enrolled in 2013
  - Student leavers any year from 2011 onwards
- Add other relevant data from the IDI
- Bring in other school-level data from outside the IDI
- Following a similar process we generate two target populations to construct sampling weights

# Nga Tamariki o Te Kupenga data set



# Simply linking Te Kupenga and Education datasets provides interesting new information

Table 13. Source of ethnicity data educational attainment

Ethnicity Source	Number of students	NCEA level 2 attainment	University Entry Rate
Education only	3,000	76.2	22.3
Census only	11,500	69.1	22.0
Education and Census	54,500	64.2	20.0
<b>Overall Māori NCEA level 2 attainment rate in MoE data</b>			
Reported in Education data	57,500	64.8	20.1
<b>Corrected Māori NCEA level 2 attainment rate</b>			
True total	69,000	65.5	20.4

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# We identify 6 Māori identity signatures

Table 3. Te Kupenga variables used in EFA of cultural engagement and identity

Dimension	Te Kupenga variables used
Te Reo	<ul style="list-style-type: none"> <li>Speak Māori</li> <li>Understand Māori</li> <li>Read Māori</li> <li>Write Māori</li> <li>Speak Māori at home</li> </ul>
Spirituality	<ul style="list-style-type: none"> <li>Importance of spirituality</li> <li>Importance of religion</li> <li>Attendance of church</li> </ul>
Self-identity	<ul style="list-style-type: none"> <li>Ethnicity (no. of ethnicities)</li> <li>How others see you</li> <li>Experience of discrimination</li> <li>Importance of culture</li> </ul>
Māori civic identity	<ul style="list-style-type: none"> <li>Registered with iwi</li> <li>Eligible to vote in iwi election</li> <li>Voted in last iwi election</li> <li>On Māori electoral role</li> </ul>
Whānaungatanga	<ul style="list-style-type: none"> <li>Whānau size</li> <li>Experience of loneliness</li> <li>Availability of someone able to help with cultural issues if needed</li> <li>Frequency of calling on a whānau member to help with cultural issues</li> <li>Frequency of providing unpaid help to family members</li> <li>Frequency of providing unpaid help on a marae</li> </ul>
Tikanga tuturu	<ul style="list-style-type: none"> <li>Knowledge of pepeha (waka, iwi, hapu, maunga, awa, tipuna)</li> <li>Frequency of visiting a marae</li> <li>Frequency of visiting the respondent's ancestral marae</li> <li>Sense of connectedness to turangawaewae if any</li> <li>Length of time having lived near turangawaewae</li> <li>Engagement with a Marae</li> </ul>

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Self-identity	Ethnicity (no. of ethnicities)
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	Experience of discrimination
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Māori civic identity	Registered with iwi
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Whānaungatanga	Whānau size
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Tikanga tuturu	Frequency of providing unpaid help on a marae
	Knowledge of pepeha (waka, iwi, hapu, maunga, awa, tipuna)
	Frequency of visiting a marae
	Frequency of visiting the respondent's ancestral marae
	Sense of connectedness to turangawaewae if any
	Length of time having lived near turangawaewae
	Engagement with a Marae

Table 4. Factor loadings for Te Kupenga EFA.

Variable Name	Content	Factor1	Factor2	Factor3	Factor4	Factor5
aTRSpeak	Speak Māori	0.85	0.06	-0.02	0.01	0.05
aTRUnderstand	Understand Māori	0.82	0.13	0.01	0.03	-0.01
aTRRead	Read Māori	0.89	0.07	0.01	0.00	-0.01
aTRWrite	Write Māori	0.89	0.03	-0.02	0.02	0.03
aTRHomeSpeak	Speak Māori at home	0.42	0.08	0.14	0.02	0.14
aSPSpirituality	Importance of spirituality	0.05	0.15	0.17	0.56	-0.10
aSPReligion	Importance of religion	-0.05	0.05	-0.11	0.99	-0.05
aSPChurch	Attendance of church	0.00	-0.09	-0.02	0.66	0.08
aIVEthnicity	Number of ethnicities	-0.07	-0.46	0.07	0.00	-0.04
aIVSeen	How others see you	0.10	0.52	-0.02	0.01	0.04
aCITotal	Civic identity engagement	0.05	0.43	0.16	0.03	0.06
aWHCulturalSuppF	Frequency of calling on family for cultural support	-0.04	0.03	-0.31	-0.08	-0.16
aWHHelpMarae	Frequency of providing unpaid help on a marae	0.07	-0.03	0.13	0.04	0.49
aTKTPepeha	Knowledge of pepeha	0.18	0.58	0.21	0.04	-0.05
aTKTMaraeF	Frequency of visiting a marae	0.05	0.18	0.09	0.03	0.67
aTKTAMaraeF	Frequency of visiting ancestral marae	0.01	0.23	-0.08	0.02	0.74
aTKTTurangaCon	Sense of connectedness to turangawaewae if any	0.03	0.70	0.06	0.07	0.09
aTKTTurangaLive	Length of time having lived near turangawaewae	-0.01	0.57	-0.08	0.06	0.18
aTKHBasic	Count of basic activities	-0.17	0.13	0.43	-0.02	0.04
aTKHContemp	Count of contemporary activities	0.14	0.05	0.53	0.07	0.24
aTKHIntense	Count of intense activities	0.12	0.15	0.75	0.06	-0.05
aTKHFreqCul	Frequency of learning about Māori culture	0.11	-0.10	0.57	0.02	0.01
aTKHFreqMag	Frequency of reading a Māori magazine	0.13	0.04	0.39	0.06	0.10
aTKHFreqTV	Frequency of listening to Māori radio	0.09	0.40	0.27	0.04	0.00
aTKHFreqPerf	Frequency of performing a	0.25	-0.09	0.47	0.05	0.19

# The five factor model of Māori cultural identity and connection

- Te Reo – speaking, understanding and using Te Reo
- Turangawaewae – sense of “being” Māori
- Tikanga hou – “doing” Māori
- Wairua – importance of church and spirituality
- Mahi Marae – are you a Marae person?

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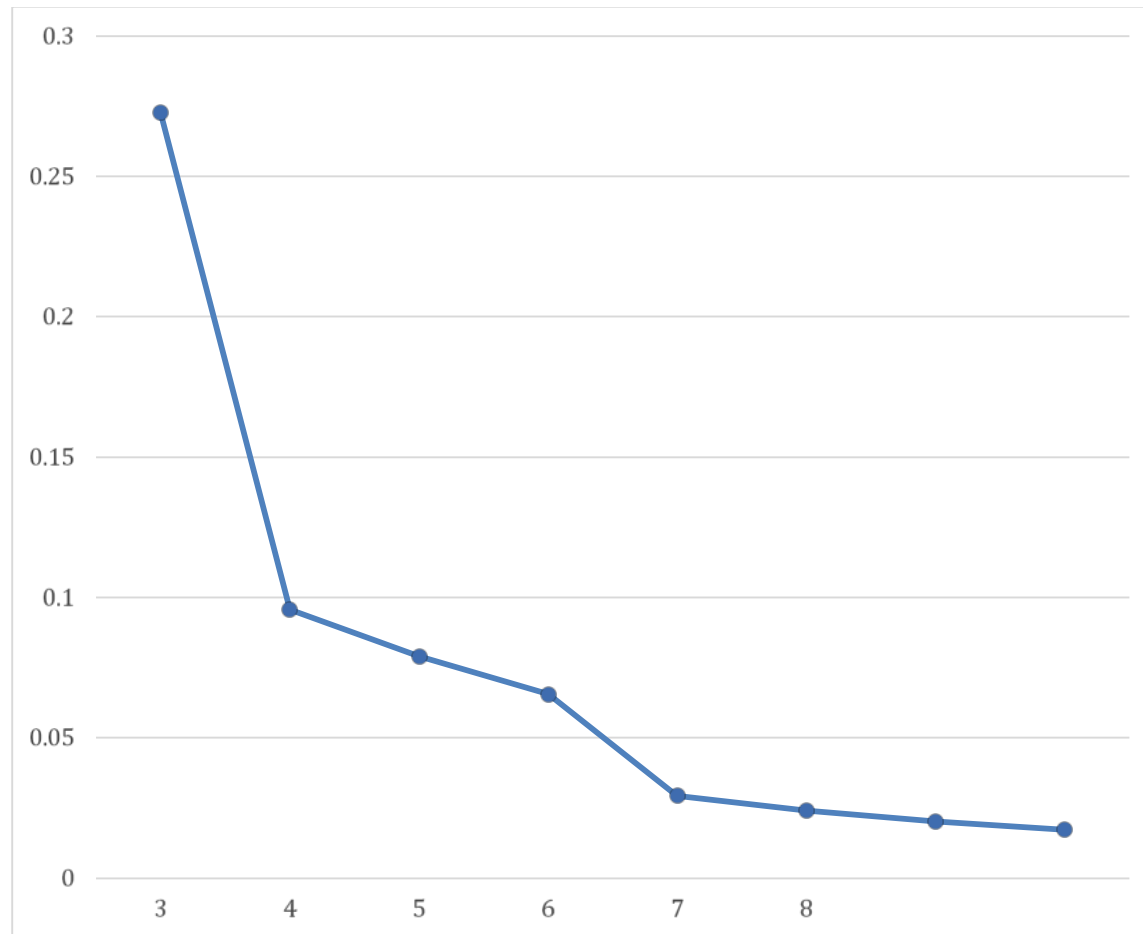
Use Exploratory Factor Analysis to reduce the cultural measures in Te Kupenga to a more manageable set of domains of Māori culture



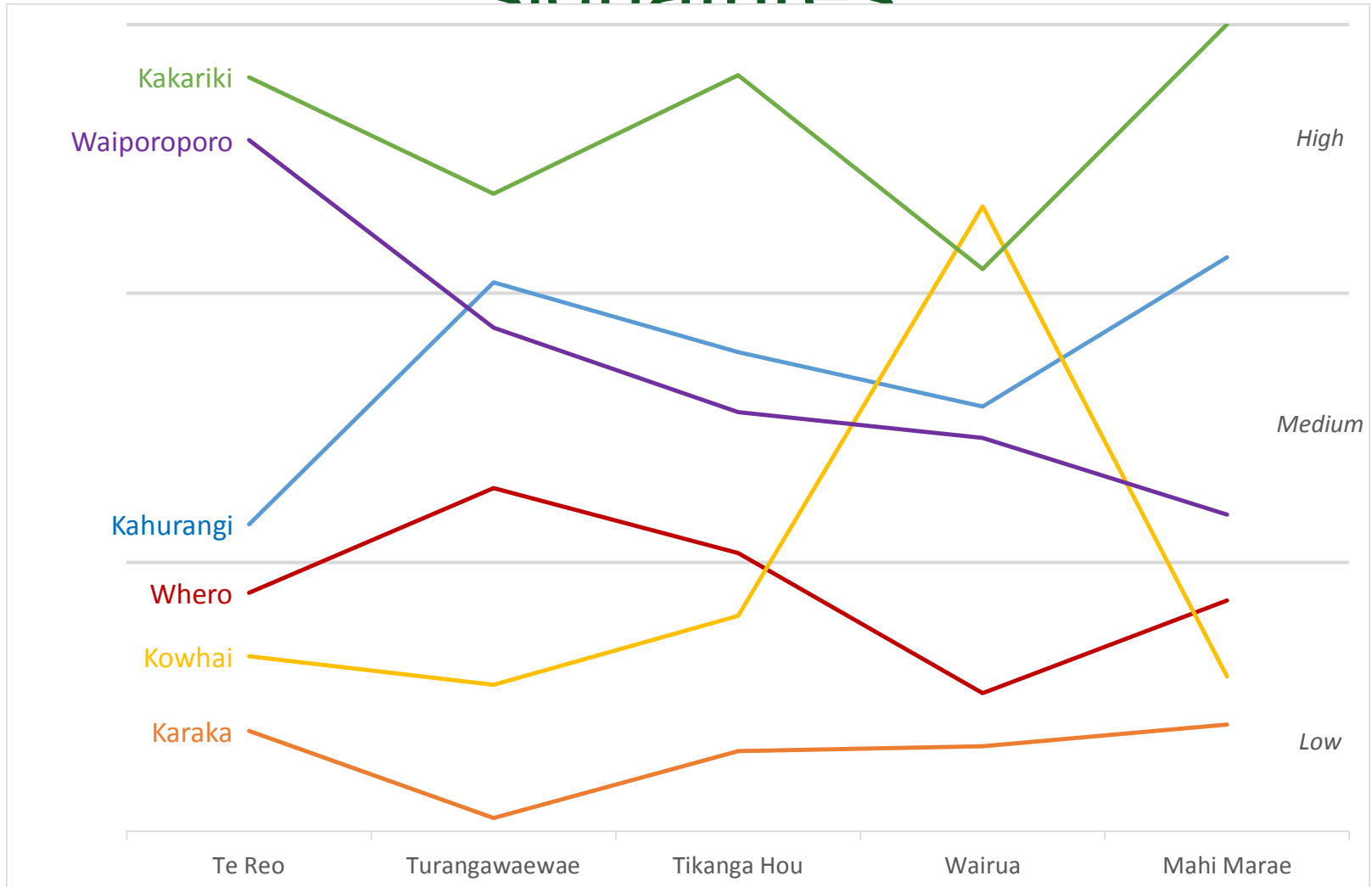
Apply a clustering methodology to these domains to create profiles of different parts of the Māori population

# A scree plot suggests 6 clusters

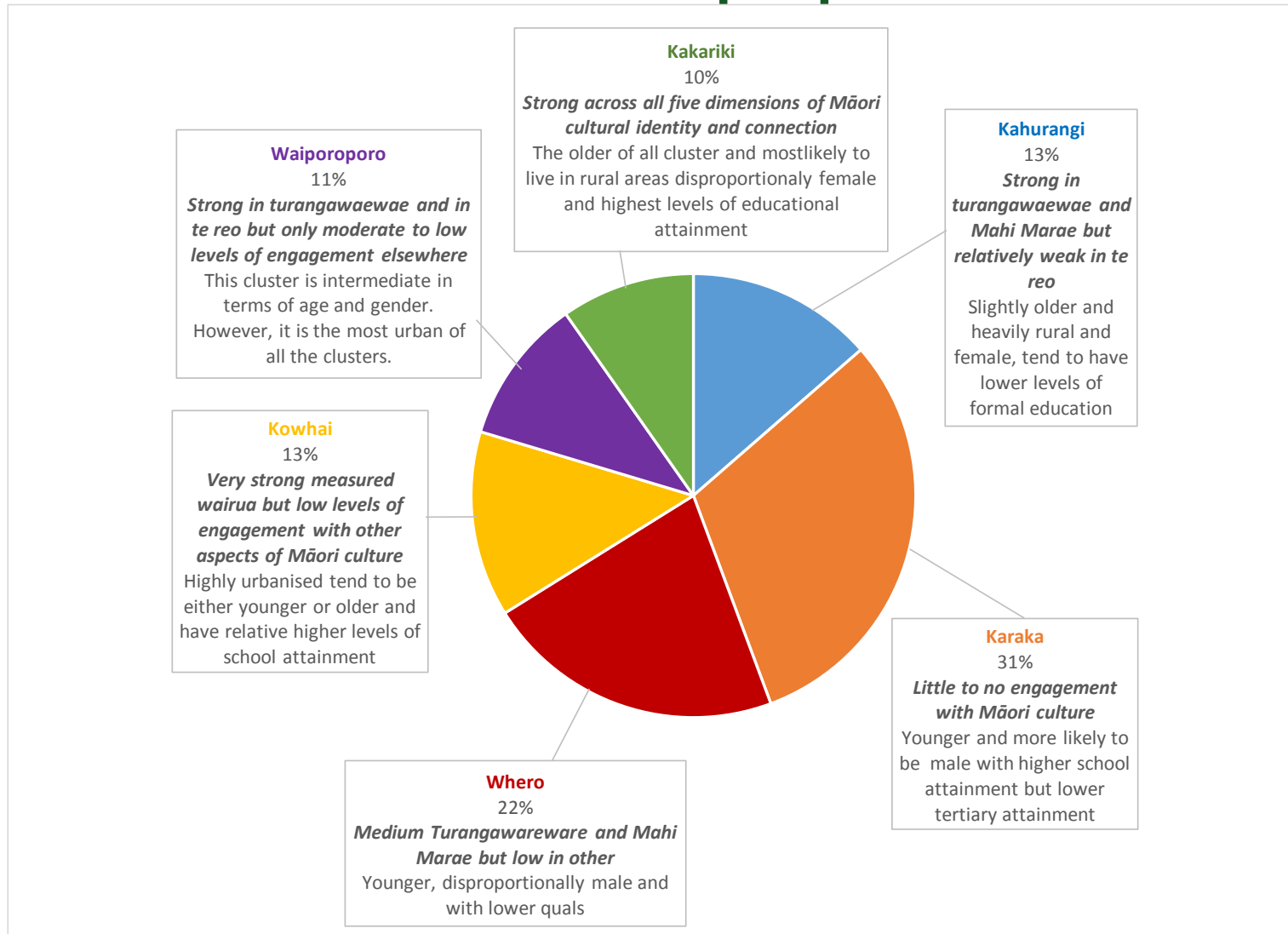
Figure 4. Scree plot of additional variance explained as number of clusters increases.



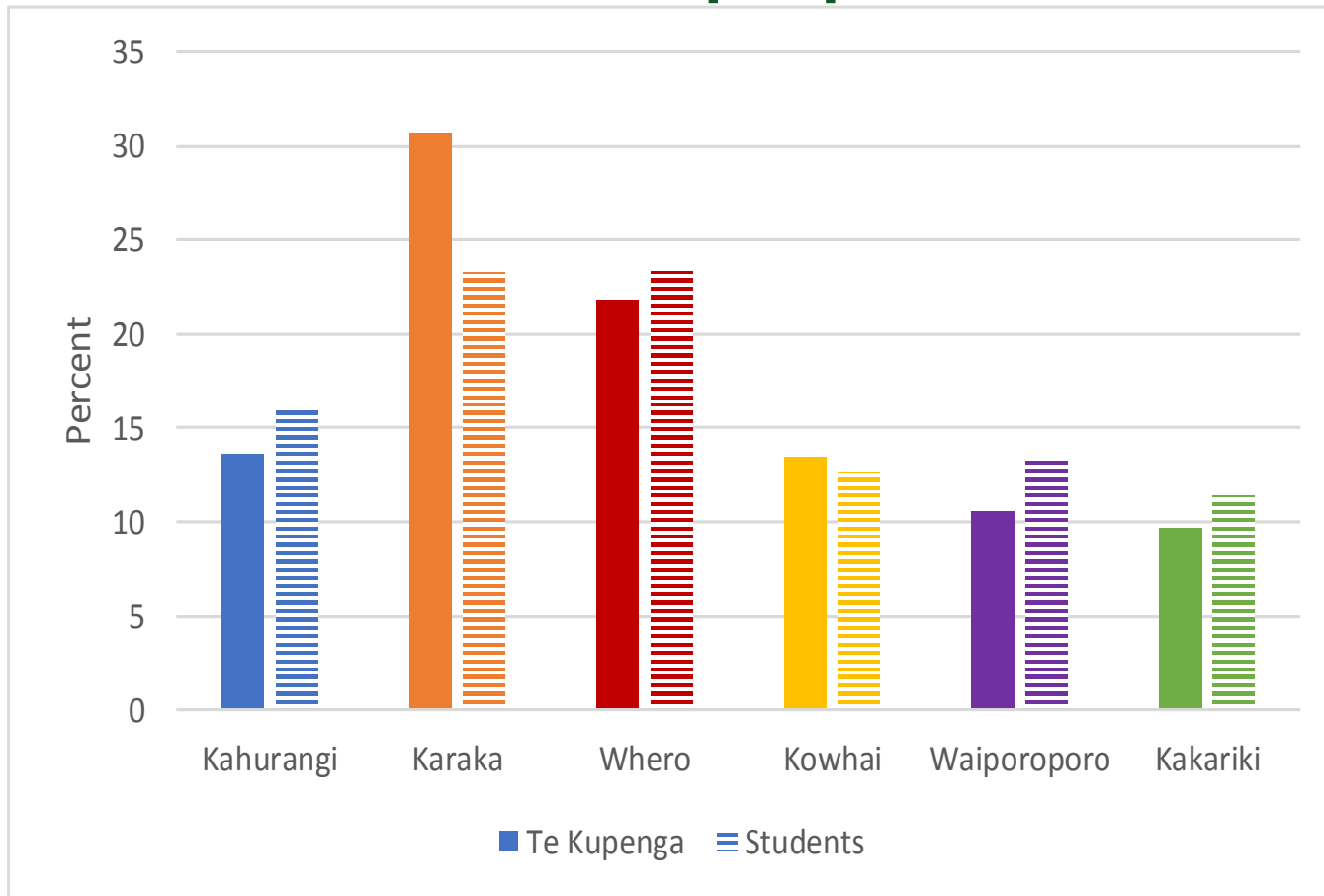
# We identify 6 Māori identity signatures



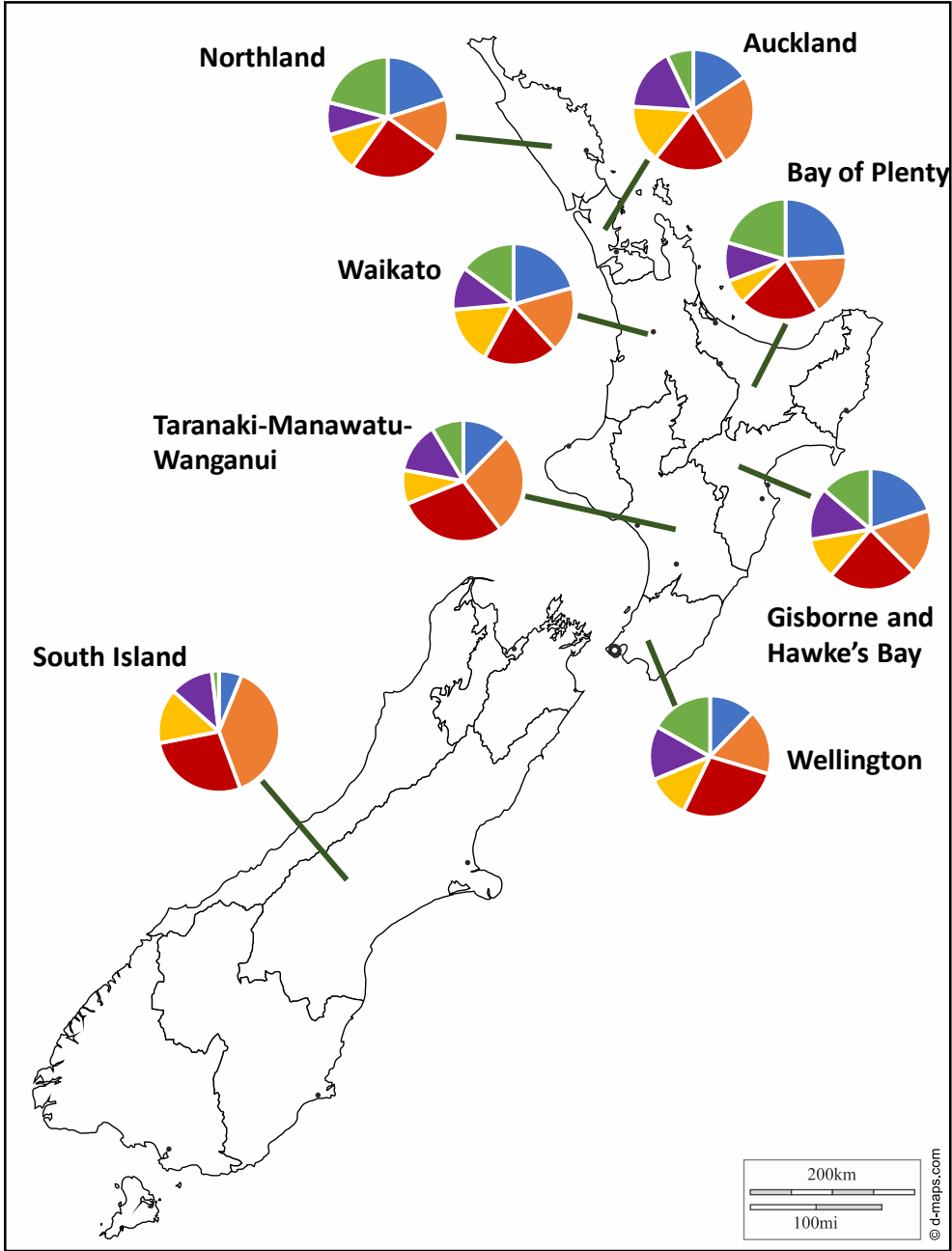
# These vary from 10% to 31% of the adult Maori population



# Māori identity signatures of the student population differ in size to the adult population



The composition of the student population varies between different parts of New Zealand



# Māori identity signature groups differ in composition and outcomes

Figure A1.1 Cluster descriptive statistics

	Proportion 55+	Proportion female	Proportion with tertiary qualifications	Proportion live outside major urban area	Mean whanau wellbeing (0-10)
<b>Kahurangi</b>	23.8%	59.7%	9.0%	40.7%	7.2
<b>Karaka</b>	14.3%	47.4%	9.5%	32.0%	7.4
<b>Whero</b>	14.5%	45.0%	7.9%	35.8%	7.2
<b>Kowhai</b>	24.9%	59.5%	10.2%	31.4%	7.4
<b>Waiporoporo</b>	22.7%	55.7%	11.6%	33.1%	7.2
<b>Kakariki</b>	27.8%	61.5%	21.1%	47.6%	7.5

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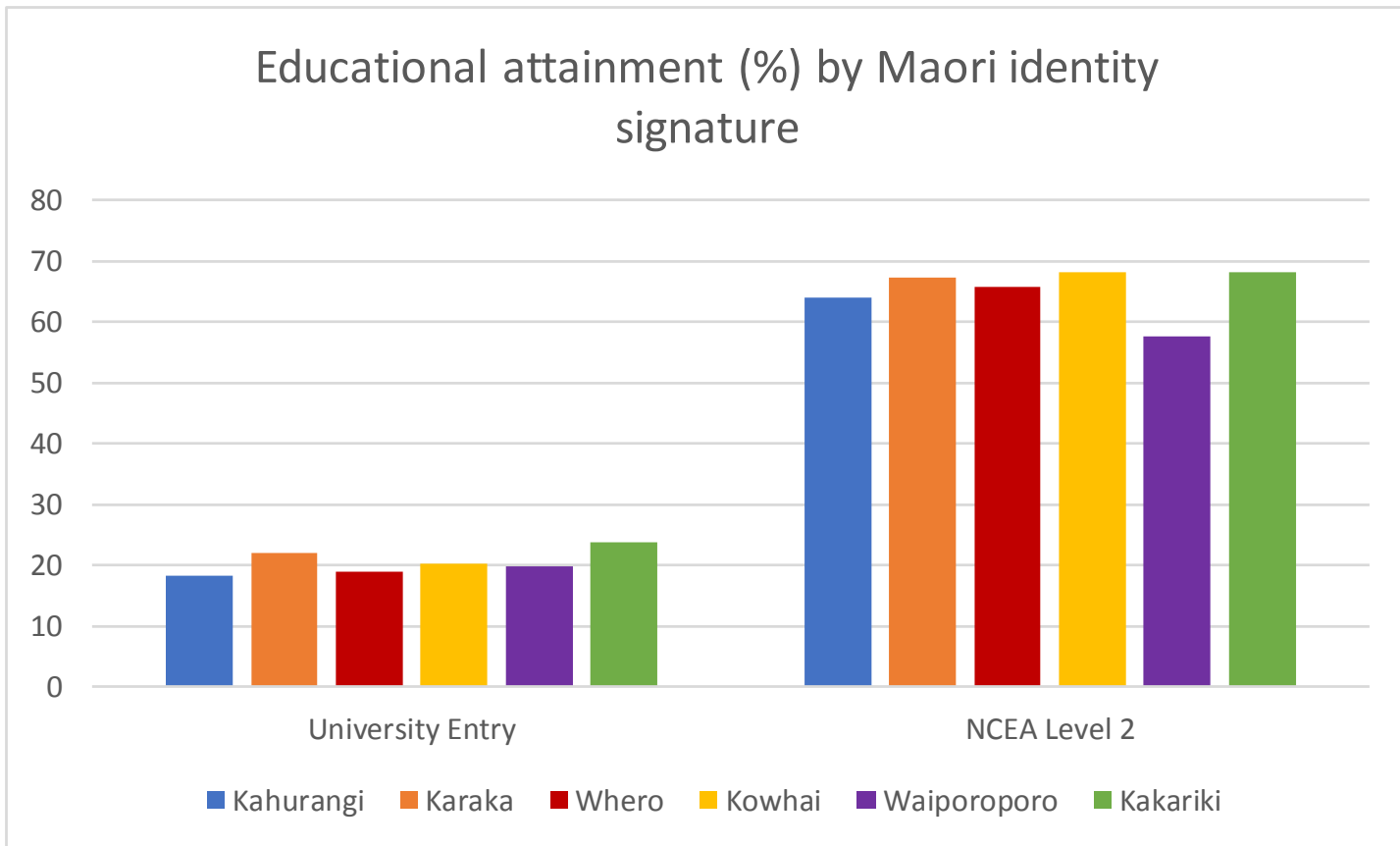


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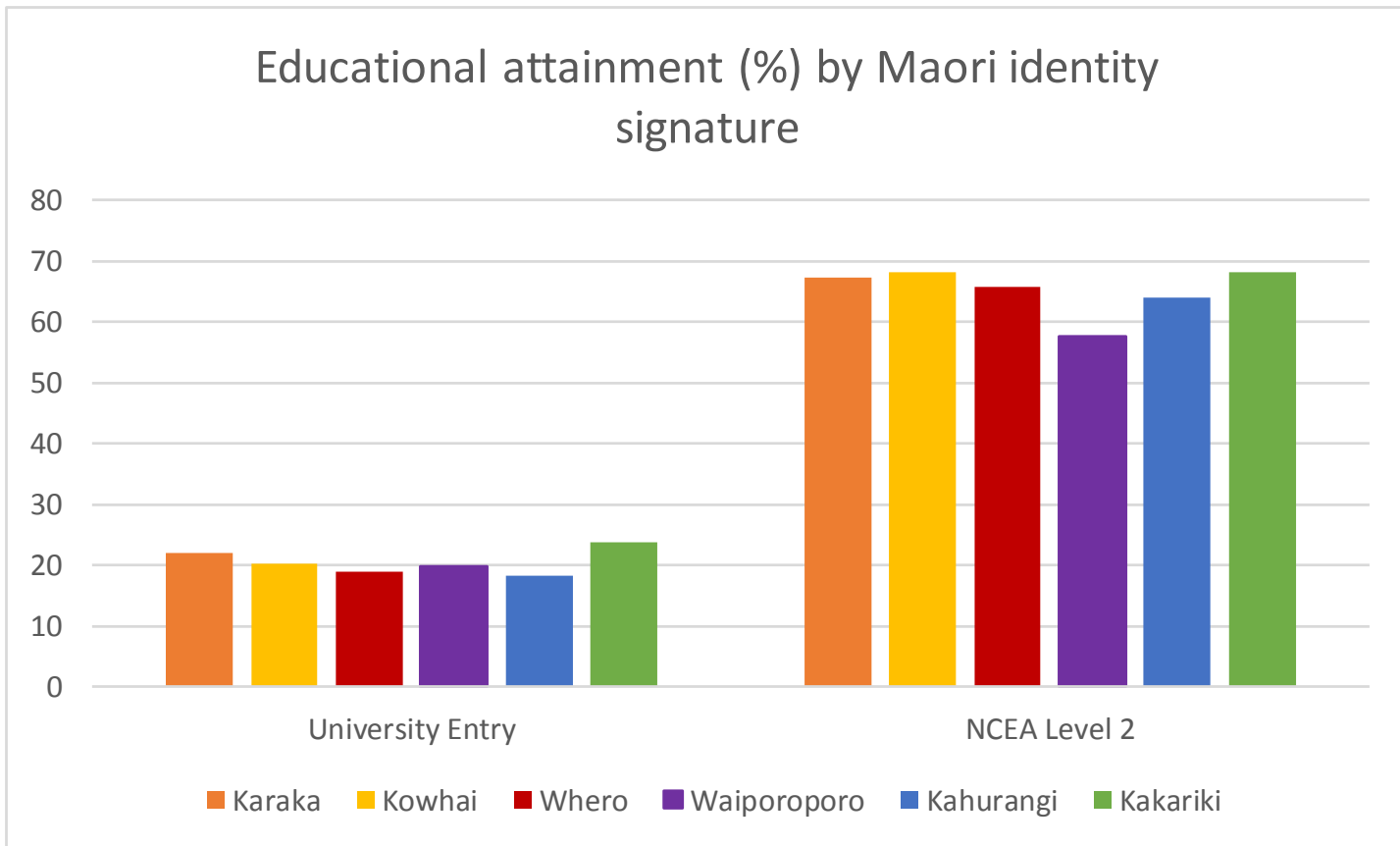


Use these profiles to investigate the relationship between Māori cultural identity and school outcomes

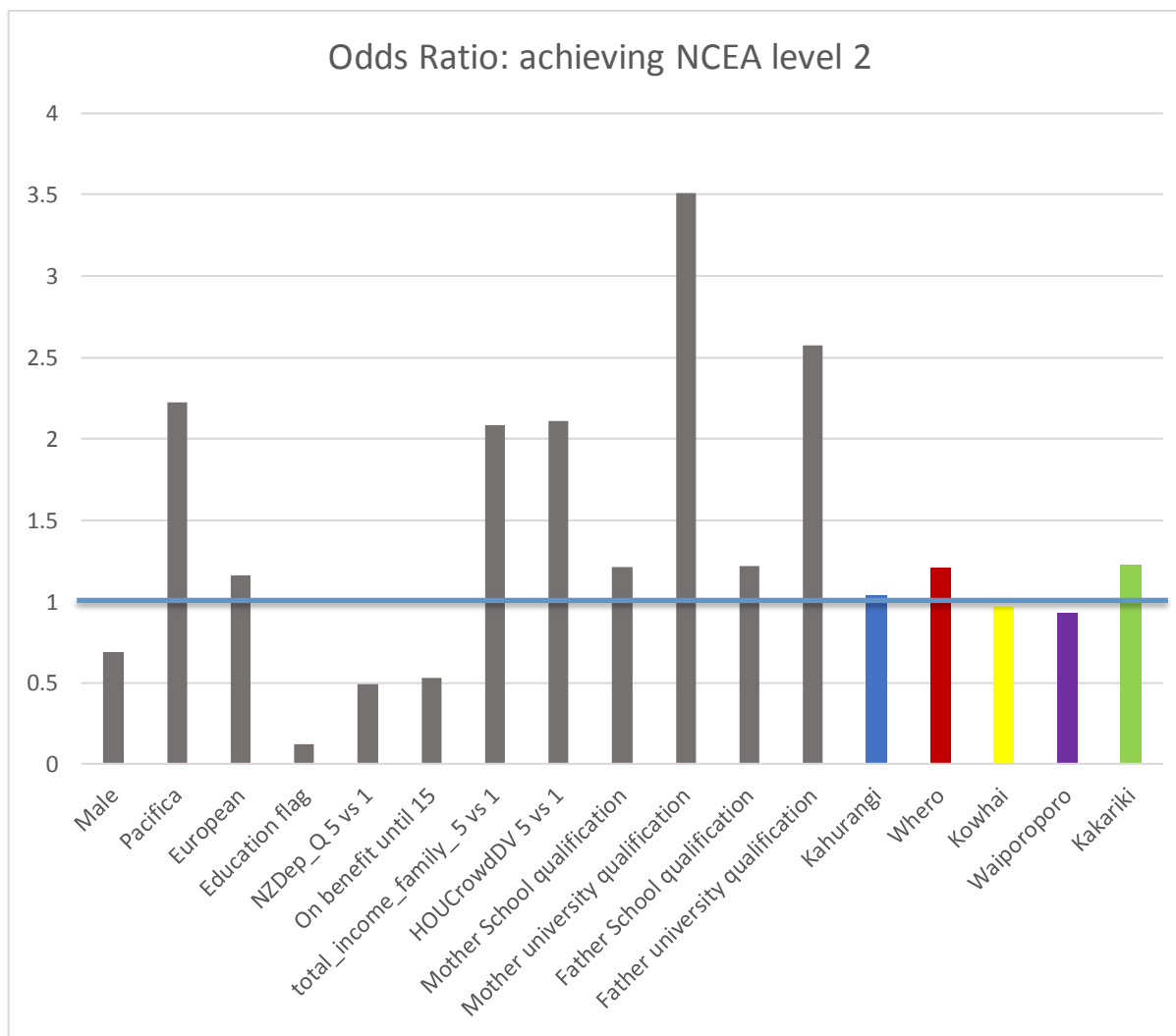
# The student Māori identity signature is associated with educational attainment



# This relationship is broadly U-shaped with respect to strength of Māori identity...

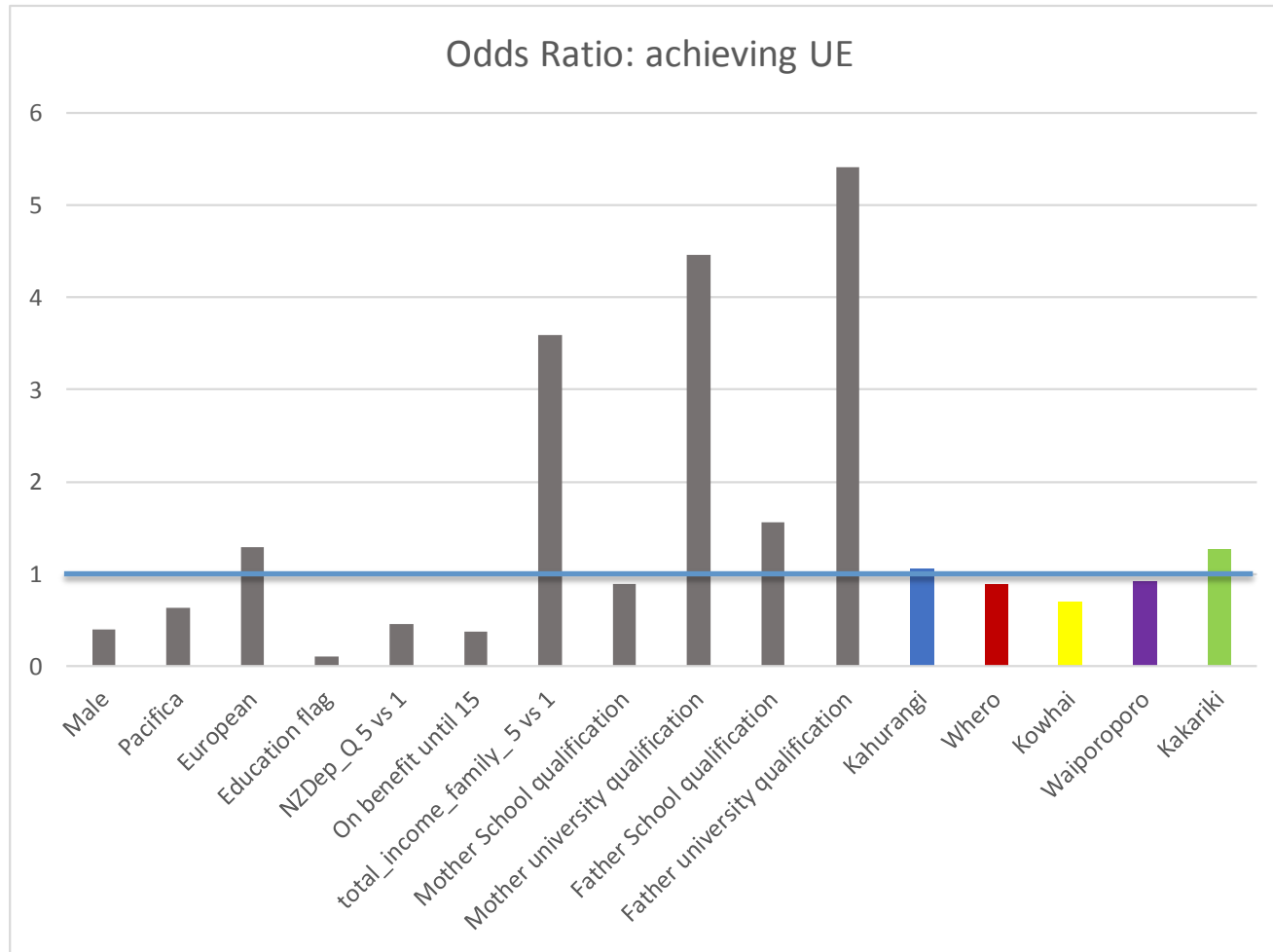


# Culture affects NCEA level 2 outcomes even after controlling for SES



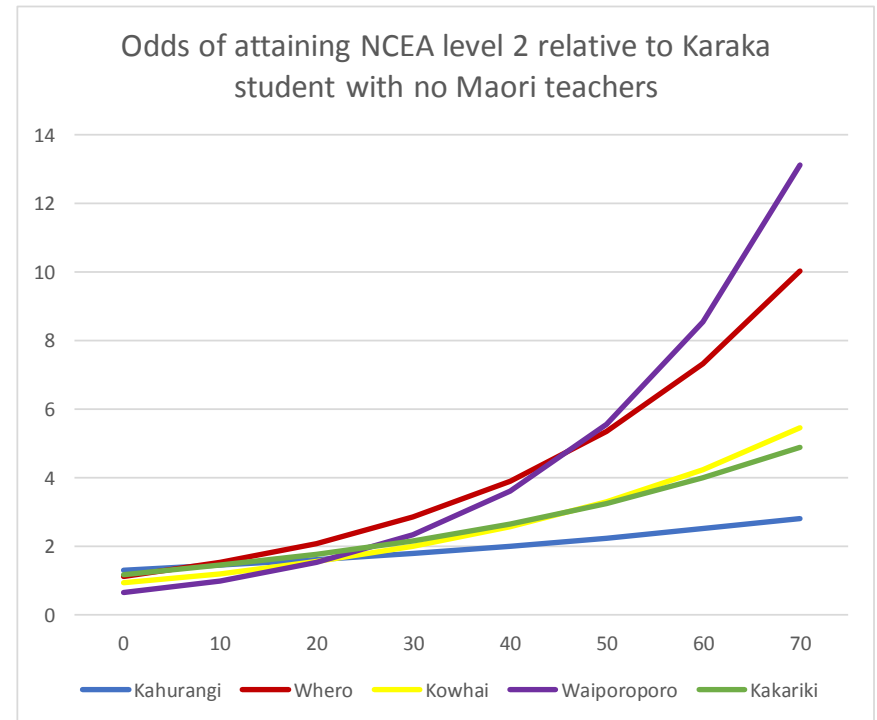
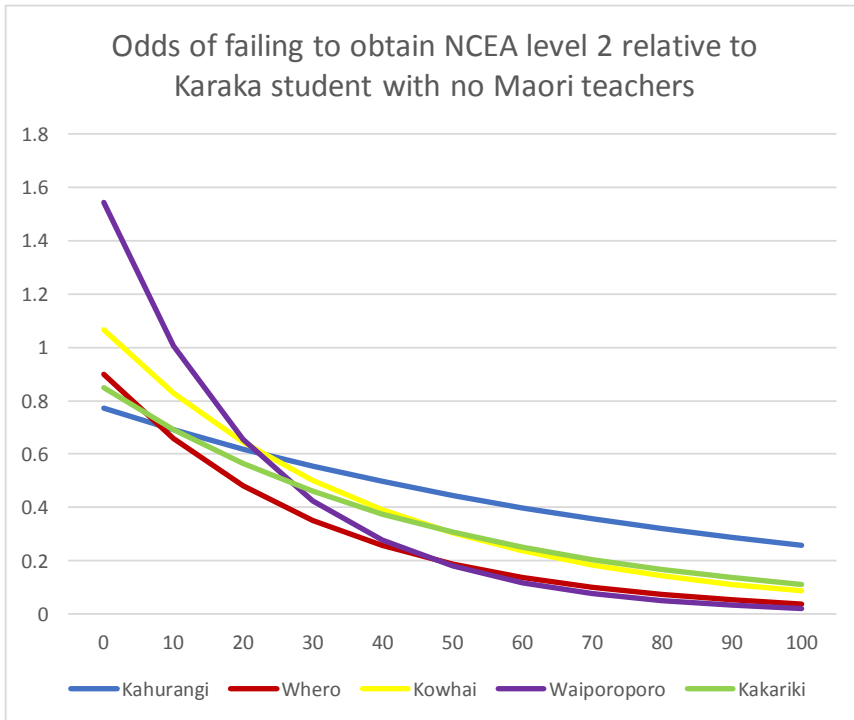
$R^2 = 0.256$

# Culture also affects University Entrance attainment



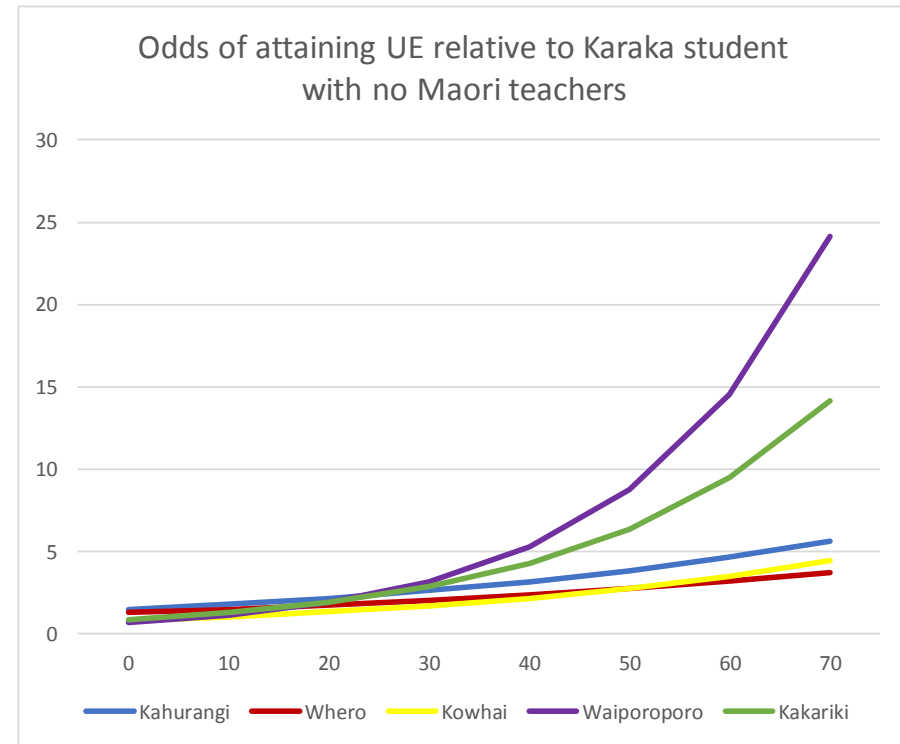
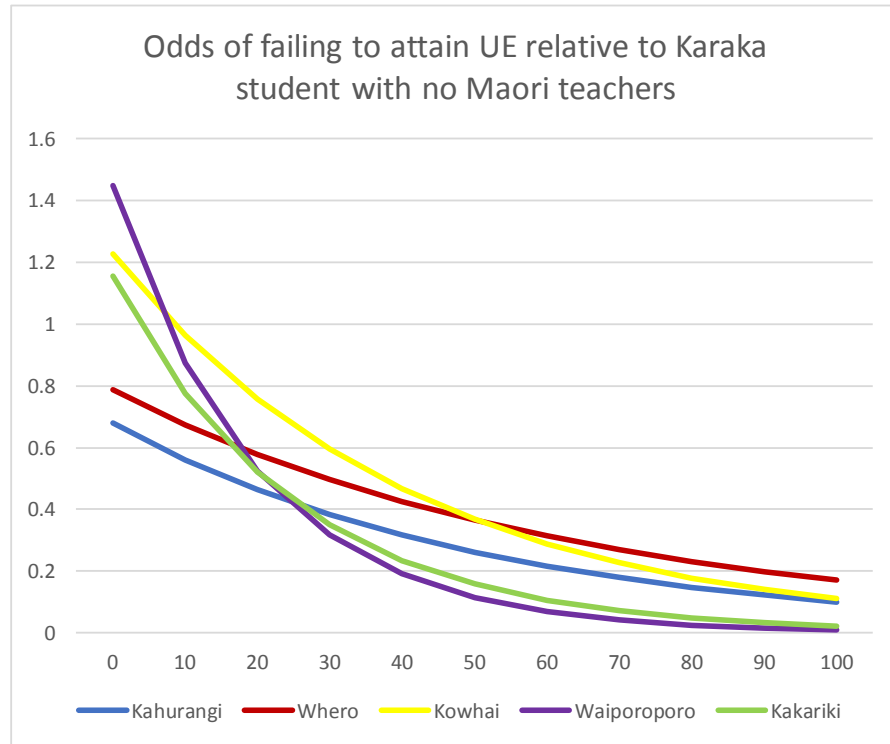
$R^2 = 0.29$

# Māori teachers have a large impact on outcomes for Māori students, but some groups benefit more than others...



$$R^2 = 0.264$$

# There is a similar impact at the University Entrance level



$$R^2 = 0.311$$