

DATA *Analytics*

Management Consulting

MEASURING THE PERFORMANCE OF EEO

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Why do we need new EEO indicators?

"Our organisation consists of 65% of the EEO target group, Women"; "Our senior executive group consists of 12% persons with disabilities, almost twice the proportion of that target group found in the general population"; "The women in our organisation earn only 75% of the salary that men earn". How often have we heard these fallacious statistics. Each trundled out in the name of measuring the performance (or non-performance) of an EEO policy or initiative. This paper is aimed at remedying the situation using a model of EEO performance from which a range of performance indicators arise.

Essentially, EEO is the recognition that a person's ethnicity, gender, and/or irrelevant physical or mental disability should be inconsequential to an individual's opportunities in the workplace. For instance, if a new position becomes available for a promotion or transfer opportunity, then membership of a target group should be an irrelevant factor in the decision about who will gain that workplace opportunity. Essentially, in many ways, EEO is a reaffirmation of the merit principle (ie the idea that a reasonable effort should be made to ensure that the best candidate for a position will obtain that position without the interference of nepotism, cronyism, bias, discrimination or any other form of favouritism) with a recognition that certain groups have not enjoyed equity of opportunity in the past. EEO also recognises that discrimination and systemic bias may still exist which may prevent certain groups' enjoyment of equal opportunity in the future.

EEO is not to be confused with representativeness, which is the recognition that decision making persons or bodies should be similar in relevant characteristics to those about which they are making decisions. For instance, representativeness might be a driver behind a government ensuring a certain proportion of government board members are women. The argument being that around 50% of constituents are women and therefore women's needs and concerns would best be served by having a similar proportion of women on these senior decision making bodies. It can often be the case that the achievement of representativeness requires the breaking (not the achievement) of EEO principles.

This can be illustrated with an anecdote: I was once the workforce analyst for a very large organisation. One time the CEO publicly announced, without consulting either me or my work unit, that the organisation would be setting an EEO target of 30% women in our senior executive by the year 2000 (we had around 16% at the time). Aside from the fact that the target was not an EEO target but a representativeness target, I checked to see how much our organisation would have to break the merit principle to achieve the outcome. Assuming the same senior executive separation rates (ie. opportunities for new placements) of the previous three years, the same level of women in the labour recruitment pool (eg. approximately 40% of our senior executive vacancies had no women applicants), and that the separation rate of women from the senior executive group could be brought down to the level of male separations, I calculated that *even if we hired every women that applied for a senior executive position* we would not reach the target. How could an EEO target be set so publicly that so obviously breaks the EEO principle? And worse how could such a discriminatory target be left uncriticised by the EEO community?

Part of the problem is that, unfortunately, EEO has not been formally performance assessed to date. There have been some efforts to measure some EEO initiatives in terms of their effect on sexual harassment complaints and/or litigation, others on the satisfaction of participants with individual interventions and other expensive efforts to measure self reported exposure to unfair discrimination (although rarely with a control sample from a non-target group). It is surprising to learn then that the ability to formally measure the level of target group discrimination in the workplace (and hence the performance of EEO) is neither difficult nor requiring significant investment of resources. Most of the information is already available within an organisation's Human Resource Information System (HRIS).

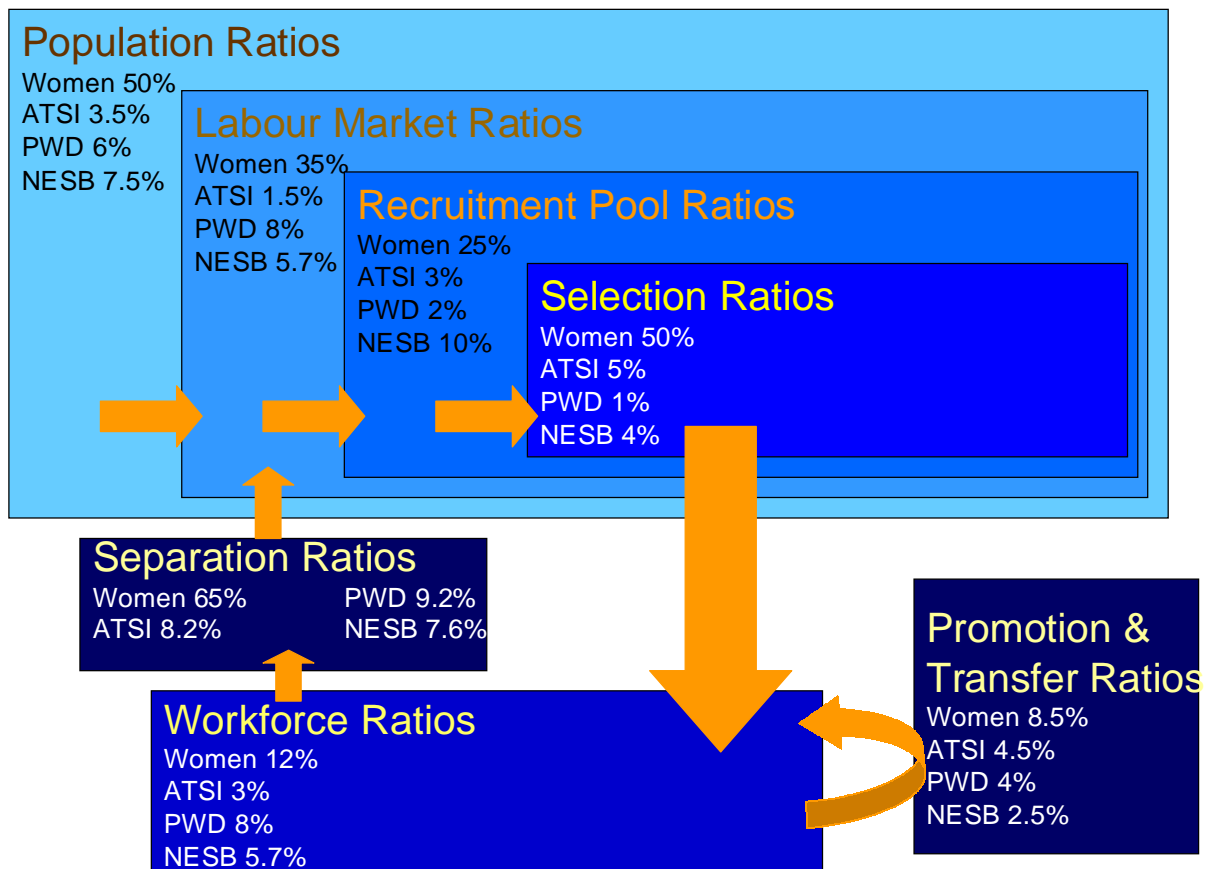


Figure 1: An EEO Model of a Workforce and its Environment

Consider Figure 1¹: We can obtain from our federal statistics agency, the Australian Bureau of Statistics (ABS), the current proportions of our target groups in the general population. Let us imagine that our population ratios are those given above for each target group. In other words 50% of our population are women, 3.5% identify with the ATSI group, 6% are PWD and 7.5% come from a NESB. These figures are often compared to workforce ratios as a benchmark to assess EEO effectiveness. However,

¹ ATSI are persons of Australian Aboriginal or Torres Strait Islander descent. PWD are Persons With a Disability and NESB are Persons from a Non-English Speaking Background. The acronyms are illustrative only and are not meant to denigrate, compartmentalise or trivialise the individuality, problems or sufferings of any individual or group. Nor does the absence of any other target group signify any belief by the author that such groups should not be formally recognised. All figures supplied (including the population target group ratios) are fictional and for illustrative purposes only.

by perusing Figure 1 we can see there are a number of levels between the population and the workforce, some of which are under control of an organisation...and some which aren't.

Labour Market Participation Equity

Within the population is the labour market from which we can obtain job applicants and/or recruits. The target group ratios² for particular workforces can be obtained from industry groups (for instance APESMA gathers target group participation data for engineers and scientists in Australia), unions and, for some industries and occupations, the ABS. There may exist societal or cultural biases which may cause differences in target group ratios between the available market pool and the general population. These differences in *equity of participation*³ (as opposed to equity of opportunity) might be of interest to industry groups, academics, social commentators (eg philosophers, historians or journalists) and government bodies, but are beyond the influence of most internal EEO programs.

An illustrative example is electrical engineers. This occupational group appears to be maintaining a workforce which is 95% male. In other words the female to male workforce ratio is 1 is to 19 (written 1:19) or 5%. When compared to the general population of 1:1, we begin to see a potentially interesting result. So an indicator of the "performance" of society in creating equity of participation in electrical engineering might be:

$$\frac{\text{Target Group Ratio of Labour Market}}{\text{Target Group Ratio of General Population}}$$

This is called the Labour Market Participation Equity (LMPE) Ratio. Should this value be around 1.00, then the target group and its *reference non-target group*⁴ (e.g. women are the target group and their reference non-target group are men, & persons with disabilities are the target group and persons without disabilities are their reference non-target group) are enjoying Equity of Participation. Presumably this means that both groups enjoy Equity of Opportunity and both are *choosing* equally to participate. In our electrical engineering example, the figure is:

$$\frac{5\%}{50\%} = 0.1$$

In this case, women are participating at a rate roughly ten times lower than expected based on the assumption of Equity of Participation. Therefore women are suffering from a systematic lack of Equity of Opportunity *and/or* are choosing not to participate in this labour market. Therefore, as this indicator approaches 1, the target group approaches Equity of Participation. As the indicator approaches 0 the target group is

² Target Group Ratios are essentially the proportion of a population that are members of a target group.

³ Refer to the Glossary at the end of this article

⁴ Refer to the Glossary at the end of this article

under-participating. As the indicator approaches infinity (ie very large numbers) the target group is over-participating.

In order to illustrate the overall model we will calculate each indice based on the ratios from figure 1. Therefore note that for figure 1, the LMPE Ratio would be:

Group	LMPE	Log LMPE
Women	35% ÷ 50% = 0.70	-0.35667
ATSI	1.5% ÷ 3.5% = 0.28	-1.27297
PWD	8% ÷ 6% = 1.33	0.285179
NESB	5.7% ÷ 7.5% = 0.76	-0.27444

Another potential indicator (although it fails the simplicity test that I emphasise is a quality of a good performance indicator below) is the natural log of the ratio. This means that equity of participation is indicated with near zero values, over-participation is indicated with values significantly greater than zero and under-participation is indicated with values significantly less than zero (eg our electrical engineering example would score -2.3). This performance indicator is easier to correctly interpret and uses a similar scale for over- and under-participation. This allows us to determine the relative severity of the inequity, which is not immediately obvious from the simple LMPE measure. Results for the Log LMPE show that the major concern for this labour market is the lack of participation of Aboriginal and Torres Strait Islanders.

Recruitment Pool Equity

The next level of analysis is the difference between the target group ratios in the labour market and those in the recruitment pool. For instance, if there are 35% women in the relevant labour market, we would expect that, should we advertise for recruits, then 35% of our applicants would be women. Therefore an indicator of recruitment equity would be:

$$\frac{\text{Target Group Ratio of Recruitment Pool}}{\text{Target Group Ratio of Labour Market}}$$

This is called the Recruitment Equity (RE) Ratio. If the RE ratio is significantly lower than 1, then women are not applying to our organisation at the same rate as the men. This could be due to a labour market reputation for having an inequitable workplace, or at least not having a market reputation for having an equitable workplace. It could also be that our labour market promotions are using male-biased channels (eg recruitment advertising in male sports magazines). It could be that women in this labour market look at career opportunities less frequently than men (ie the bias is not unique to your organisation). These issues are within (at least partial) control of an internal EEO initiative and therefore this is the first indicator of relevance to internal EEO performance measurement.

For Figure 1 the Recruitment Equity (RE) Ratio for each target group would be:

Group	RE	Log RE
Women	$25\% \div 35\% = 0.71$	-0.34249
ATSI	$3.0\% \div 1.5\% = 2.00$	0.693147
PWD	$2\% \div 8.0\% = 0.25$	-1.38629
NESB	$10\% \div 5.7\% = 1.75$	0.559616

The area of greatest concern in our hypothetical organisation would be the large under-representation of persons with disabilities in our recruitment pools. As can be seen the interpretation must be done against some standard in order to ascertain the size of any EEO performance issue. There are five potential standards:

- Comparisons between target groups (eg women vs ATSI)
- Comparisons across different workforces (eg engineers vs secretaries)
- Comparisons with the same ratio from the past (eg 1999 vs 1998)
- Comparisons against a gold standard (eg 1.00)
- Comparison against other organisations on the same ratio (ie benchmarking)

Interpreters should also consider the size of the sample when making interpretations. A useful concept is sensitivity. To test the sensitivity of our analysis we may ask: If we were to change one candidate's target group status, would this dramatically effect our interpretation of the results? If so, it is suggested that further information is collected before action is undertaken.

Selection Equity

If there are no systematic biases in our selection processes either for or against EEO target groups, then we would expect that the target group ratios in the recruitment pool and the target group ratios of the successful candidates would be similar. Therefore, similarly to the LMPE and RE ratios, a useful measure of the equity of our selection processes is:

$$\frac{\text{Target Group Ratio of Selected Candidates}}{\text{Target Group Ratio of Recruitment Pool}}$$

This is called the Selection Equity (SE) Ratio. If this figure is particularly higher than 1, then we are over selecting target groups from our applicant pool. An example of this may be over-selecting young women for base grade positions for soon-to-be redundant skills and experience like filing and shorthand. If the figure is lower than 1, we are underselecting our target groups from the selection pools. This would be a serious problem indicating systemic illegal discrimination in our selection processes. All of the data required to measure the SE ratio can be collected internally and, for some target groups, already is collected. It is also the single most important measure of the success of EEO in an organisation.

For Figure 1 the Selection Equity (SE) Ratio for each target group would be:

Group	SE	Log SE
Women	$50\% \div 25\% = 2.00$	0.693147
ATSI	$5.0\% \div 3.0\% = 1.67$	0.510826
PWD	$1.0\% \div 2.0\% = 0.5$	-0.69315
NESB	$4.0\% \div 10\% = 0.4$	-0.91629

In this case we are obtaining over-representation of women and Aboriginal & Torres Strait Islanders amongst our successful candidates. The largest issue however appears to be that our selection process is screening out applicants with a Non-English Speaking Background to a very large extent and Persons With Disabilities to a large extent.

Internal Opportunity Equity

If there are no systemic biases in our internal opportunity decision making⁵, we may expect that any transfer, promotion or expensive development opportunities would be given to groups of staff with similar target group ratios to that found in the workforce as a whole. In other words, a useful indicator would be:

$$\frac{\text{Target Group Ratio of Promotions \& Transfers}}{\text{Target Group Ratio of Internal Workforce}}$$

This indicator is called the Internal Opportunity Equity (IOE) Ratio. If the figure is significantly higher than 1.00 then our target groups are over-represented. If it is significantly lower than 1 then they are under-represented. If target group members are obtaining less opportunities than their reference non-target group, this may be an indicator of systemic and/or cultural discrimination in these internal opportunity decisions. Confounding factors include the average seniority of target groups, the average tenure, average FTE (eg if women are over-represented in the part-time workforce, they are theoretically not gaining workplace relevant experience as quickly as the men), and any differences in self-promotion compared to their reference non-target groups. Statistical analyses to remove these factors are available.

⁵ Most readers were probably expecting the next indicator to be a ratio of the successful candidate target group ratios and the overall internal workforce ratios (for explanatory purposes we will term such an indicator the Workforce Direction ratio). However, such an indicator is not of particular interest in assessing the performance of EEO. The Workforce Direction ratio may give a partial indication of the direction of the overall workforce target group ratios. In other words whether the target group ratios internal to the organisation are going up or down. However, the overall workforce ratios are not of particular concern to an EEO program, but are of concern for efforts which are attempting to achieve representativeness. So the Workforce Direction ratio will not be examined here but may still be of use to your organisation.

For Figure 1 the IOE Ratio for each target group would be:

Group	IOE	Log IOE
Women	$8.5\% \div 12\% = 0.71$	-0.34484
ATSI	$4.0\% \div 3.0\% = 1.33$	0.287682
PWD	$4.5\% \div 8.0\% = 0.56$	-0.57536
NESB	$2.5\% \div 5.7\% = 0.44$	-0.82418

The above figures indicate a concern with the internal opportunities available to people with a Non-English Speaking Background. Note, however, that the relative size of the target group should also be considered when interpreting the figures. Although the women, in this case, are suffering less internal opportunity discrimination than persons with a non-english speaking background, women are a much larger target group. Therefore an intervention which eliminates discrimination for women may be a larger win for the EEO function than removing the greater discrimination suffered by a much smaller group of people.

Separation and Retention Equity

The final measure is second in importance only to the selection ratio. If we have a non-discriminatory work environment then we would expect that our target groups would leave our organisation at approximately the same rate as the reference non-target groups. This leads us to the following performance indicator:

$$\frac{\text{Target Group Ratio of Separated Employees}}{\text{Target Group Ratio of Internal Workforce}}$$

This indicator is called the Separation and Retention Equity (SRE) ratio. If this indicator is significantly higher than 1.00, then our target groups are choosing to leave the organisation more than our reference non-target groups. This could be due to a discriminatory workplace or greater opportunities for target group members elsewhere.

For Figure 1 the SRE Ratio for each target group would be:

Group	SRE	Log SRE
Women	$65\% \div 12\% = 5.42$	1.689481
ATSI	$8.2\% \div 3.0\% = 2.73$	1.005522
PWD	$9.2\% \div 8.0\% = 1.15$	0.139762
NESB	$7.6\% \div 5.7\% = 1.33$	0.287682

In this case all of our target groups are over-represented in the separation statistics, although the over-representation of NESB and PWD are not very large. It is the women and ATSI groups which have very high separation rates.

What makes a good performance indicator?

A good performance indicator must have the following attributes:

Outcome (not output or input) based

Did the intervention or strategy have the desired outcome? Let us imagine an Aboriginal and Torres Strait Islander Management Fasttrack program which was aimed at improving the promotion chances of participants. Therefore an outcome based KPI would be whether target group members who participated had a promotion rate higher than target group members who did not participate. Non-outcome based indicators might include: satisfaction of participants, attendance figures, number of awards received by the program etc.

Objective

As much as possible, performance indicators should be based on verifiable evidence, such that two independent judges would arrive at the same figure. If the figures arrived at by two independent evaluators could be substantially different given the same evidence (i.e. the same quality of program) then the performance indicator is too subjective and at risk of suffering from positive or negative bias.

Measurable

Akin to saying that in order to pass a driving test a driver must be alive. Suffice to say that if the performance indicator can't be measured it will not be used.

Failable

Possibly the least quoted and most important aspect of a performance indicator or target. If the indicator is manufactured in such a way that it will always indicate success then we will falsely always assume we are successful. If we cannot fail according to the indicator we will not learn what strategies or interventions are unsuccessful and therefore which should be modified, dropped or diminished. Further we will not know which really are successful and should be expanded.

Reliable

If the same performance is measured more than once the indicator should give the same result. This is more important than accuracy. If an indicator is reliably inaccurate then it is just as useful as if it is reliably accurate. Accuracy is the last thing you need. You need it, its just less important than reliability and precision.

Precise

Precision is related to the objectiveness criteria. If an indicator is precise it will deliver a very similar estimate given the same evidence. This indicates that the level of unsystematic error in the indicator is relatively low. This does not necessarily mean that it is very accurate. For instance, my watch stays exactly 5 minutes behind time. It is therefore very precise (and reliable), however it is less accurate than a clock that is no longer working. A non-working 12 hour clock will be totally accurate twice a day...my watch is never accurate.

Valid

The indicator must be measuring what it purports to measure. For instance if a measure is called level of workplace discrimination and is based on target groups' self-reported levels of discrimination. It may actually be measuring workplace dissatisfaction instead of workplace discrimination.

Intuitive

The performance indicator must be one that stakeholders believe they would have created had they considered the problem. In other words the indicator makes sense.

Impactive

The indicator must be one that people take notice of. This is normally achieved if it is highly intuitive, simple and reliable.

Simple

The indicator must be relatively easy to understand in terms of how to collect the information, how to calculate it and how to interpret the outcome. The Log ratios mentioned in this paper would fail this test.

Easy to collect

Data for the indicator must not be so difficult to collect that the cost of obtaining the data prohibits the collection. For instance doctors would love to know the actual arterial build up of cholesterol within our veins and arteries. They could gather this information by making incisions in a number of key arteries and veins and physically measuring the build-up. After measurement they would need to reattach the veins

using microsurgery. Needless to say most doctors use our blood pressure to give them an indicator instead.

Verifiable

The figures must be able to be recalculated by an independent auditor.

Comparable

In order for the figures to be interpreted they must be comparable to something. Most comparisons are either with the same indicator collected in a different domain (eg compared across target groups), in the past, to other parts of an organisation, or to external organisations or to some golden standard.

Summary

In summary, a range of indicators were investigated for use in determining the performance of an EEO function. They were:

Labour Market Participation Equity (LMPE) Ratio	=	$\frac{\text{Target Group Ratio of Labour Market}}{\text{Target Group Ratio of General Population}}$
Recruitment Equity (RE) Ratio	=	$\frac{\text{Target Group Ratio of Recruitment Pool}}{\text{Target Group Ratio of Labour Market}}$
Selection Equity (SE) Ratio	=	$\frac{\text{Target Group Ratio of Selected Candidates}}{\text{Target Group Ratio of Recruitment Pool}}$
Internal Opportunity Equity (IOE) Ratio	=	$\frac{\text{Target Group Ratio of Promotions \& Transfers}}{\text{Target Group Ratio of Internal Workforce}}$
Separation & Retention Equity (SRE) Ratio	=	$\frac{\text{Target Group Ratio of Separated Employees}}{\text{Target Group Ratio of Internal Workforce}}$

It was noted that a number of issues had to be considered when interpreting these indicators:

1. The size of the target group and its reference non-target group must be considered both in terms of the sensitivity of the indicator to random variation and the organisational impact of making interventions on differing size groups.
2. The requirement to use some comparative measures to ensure the obtained figures are anchored. Comparisons can be:
 - Against other target groups
 - Against other occupations or positions
 - Against results from the past
 - Against results from other parts of the organisation
 - Against results from other organisations using the same indicator
3. The understanding that if not combined as outlined in this article, target group ratios measure equity of participation not equity of opportunity
4. There may be confounding factors beyond equity of opportunity such as a target groups' level of self-promotion, workplace participation, and average tenure of target groups in comparison to their reference non-target group. These factors can be removed using statistical techniques.
5. The option of using Log indicators to obtain a better comparative estimate of the size of the issue

Finally a quick analysis of what makes a good performance indicator was presented. The attributes of a good performance indicator are:

- Outcome (not output or input) based
- Objective
- Measurable
- Failable
- Reliable
- Precise
- Valid
- Intuitive
- Impactive
- Simple
- Easy to collect
- Verifiable
- Comparable

It is useful to note that very few indicators meet all of the above criteria.

By no means are the above indicators meant to be an exhaustive list of EEO performance indicators. A number of indicators currently in use should be used to round out a thorough evaluation of the performance of EEO. These may include:

- The rate of sexual, verbal and physical harassment complaints
- The rate of grievances filed about transfer, promotion and other internal opportunity decision making
- Unscheduled absence levels of target group staff
- Self-reported discrimination levels (compared to non-target group self reports)
- Staff satisfaction
- Number of dependents - target group vs non-target group across seniority

Glossary

Equity of Opportunity

This is the goal of EEO. This state of affairs is when any workplace opportunity, whether it be:

- to become aware of a vacancy,
- be considered for a promotion or transfer,
- know of and be considered for a major development opportunity,
- have access to corporate status symbols (eg big office, comfortable chair) or
- have the opportunity to perform
- or any other workplace opportunity;

that it is equally available to all members of staff regardless of their membership of a target group.

This is often confused with *Equity of Participation* (see below) as some people assume that given equity of opportunity, target group members will automatically choose to participate. Equity of Opportunity does not guarantee that the opportunity will be taken up. However, Equity of Opportunity is very difficult to measure and Equity of Participation is a reasonable proxy.

Equity of Participation

This is a goal of representativeness. This state of affairs is when all target groups are equally represented at all seniority levels, salary levels and in all occupations across an organisation as that found in the general population. The state of affairs can be reached only if the personal career choices of target group members are identical to their reference non-target group or if the principles of merit and equity are broken in favour of those groups that choose to under-participate. Equity of Participation is relatively easy to measure as an analyst merely needs the target group ratios across each of the dimensions of interest. These measures are often mistakenly used as the key measures of EEO functions.

Reference Non-Target Group

These are the remainder of a population to which a target group should be compared. The four reference non-target groups for the target groups used in this article are:

Group	Reference Non-Target Group
Women	Men
ATSI	Person not from an Aboriginal or Torres Strait Islander Heritage
PWD	Persons Without Disabilities
NESB	Persons from an English Speaking Background

When undertaking any form of survey, questionnaire, or study to ascertain the level of workplace satisfaction, discrimination, or opportunity, it is crucial to include the reference non-target group for comparison purposes. It is also crucial to note that if there exists unfair discrimination within the workplace, then it is being primarily perpetrated (although not always, sometimes target groups discriminate against themselves) by the reference non-target group. Therefore the group which primarily needs to modify its behaviour is the reference non-target group, and it is those groups which should be the major focus of EEO function interventions.