

Is institution based training for the future in the automotive industry? What the trainees have to say.

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Abstract

Debates about what should and what should not be included in the training program have been a thorn in the flesh for educators, policy makers and the industry practitioners. This paper will report and discuss the views of automotive trainees about whether or not their training is towards work within the automotive industry in the future. The data was collected from two sets of automotive trainees located in two totally different countries of the world, Kenya and Australia. The questions were similar and the views of the trainees are related, though different. The questions that were asked are related to the emphasis of training, training and coping with technology change in the work place in addition need for retraining at the work place. The data were discussed according to each question and group based on two main themes. A way forward for the different stakeholders will then be recommended.

Introduction

This paper reports some views that automotive trainees in Kenya and Australia have about the courses that they were pursuing. The issues discussed here in this paper are part of a major comparison of automotive training in relation to the work situation in the two countries. This paper discusses two main themes extracted from a total of eleven quantitative data statements. In addition, the qualitative views that were offered by the trainees on different aspects of the training are covered. The main reason behind this research is that policies in Vocational Education and Training (VET) are linked to national aspirations and achievement in economic growth (Young 1998). In fact both developed and developing countries view VET as the only savoir in the provision of response to the changes in the global economy (ILO 2003). These responses can only be meaningful if all the views by the stakeholders are included and to me, the trainees are major force in this. They are the current consumers of the program and its success depends on their willingness to fully participate in the program issues.

Background information

Kenya is a country in the eastern part of Africa with a total population of about 31 million people (World fact book 2003). The current education system within the country is in the order of eight years of primary education, four years of secondary education and at least four years of university education (8-4-4). It is referred to as the 8.4.4 system of education. This system describes education for those who progress up to the university level. However, within the education system, there are other institutions, which provide education to the students who do not necessarily go through to the university (Kitainge 2003). These are the National polytechnics, which offer ordinary, and higher national diplomas, the institutes of science and technology, and the technical training institutes which offer ordinary diplomas and certificates.

Kenya has had several proposals (Ramani, 2002) in her educational system within a span of approximately 40 years (Kitainge 2003). We have had the Ominde (1964), the Gachathi (1976), the Mackay (1981), Kamunge (1988) and the Koech (2000) Commissions. This has been partly (Eshiwani, 1990; Obagi et al, 2000), due to the emphasis the government and the people of Kenya have given to education and partly the way education has failed to respond to the various national needs and trends in the world today (Kitainge 2003). All the commissions pointed at the issue of relevance in education. Specifically the Kamunge (1988) and Koech (2000) reports suggested that education in Kenya should place emphasis on the relevance and the quality to enhance development. From all the commissions, quality, relevance and vocationalization of education, which are the concerns of this research, came out boldly and up to now they still are precious goals to go for. This research looked at the issue of relevance in the training of mechanics in the context of a changing world and work conditions. It looked at the case of middle level colleges that offer most of the VET courses. It has a comparative research design aimed at advancing lessons of the two countries, Kenya and Australia from each other.

In Australia, VET is offered in both the state owned and run Technical and Further Education institutes (TAFE), Registered Training Organisations (RTO) and at the universities (Smith & Keating 1997, DEST, 2000). The VET policy in Australia is quite elaborate and involves most of the significant stakeholders (Ainley et al 1997, ANTA 1998, Kitainge 2003). The system enables providers to operate and issue qualifications that are nationally recognised. The mode of teaching and examination is through training modules. The modules are organised in the form of training packages that specify the competencies that must result from the provision of the learning services. They also specify industry requirements for the assessment and the qualification that result from the competence. This self-paced learning is learner centred and is called Competency Based Training (CBT) (Smith & Keating 1997).

The commonwealth, state and territory governments provide the policy and regulatory frameworks for VET system (DEST 2000). The governments implement the National Training Frameworks (NTF) to enable consistency, and national recognition of provider services. Governments also provide about half the funds required for the system, while the learners and the system provide the other half. Australian National Training Authority (DEST 2000, ANTA 1998) outlines five objectives that the ANTA Ministerial Council identifies within the mission statement as first to provide a VET sector capable of equipping Australians for the world of work. Others are enhancing mobility in the labour market; achieving equitable outcomes in vocational education and training; increasing investment in training; maximising the value of public vocational education and training expenditure.

These direction indicators emphasised by ANTA show that Australia is in constant review of the VET system. Australia can serve as a role model in VET because it is a leader in the implementation of industry driven CBT form of training and qualification (DEST 2000). It is also claimed to be responding to the challenges of economic globalisation and developing technologies (ANTA 1998; Keating et al. 2002). VET is playing an important role in ensuring that industry and the community have the skills and knowledge to compete in this changing environment. However the question still remains, how well is the institutionalised automotive training compatible with the very fast moving world of work?

The Research Design

Research design is a conceptual structure within which research is conducted. It informs the arrangement of the conditions for the collections and analysis of the data in a manner that aims to combine relevance to the research purpose (Kothari 2003). The design type under which this study falls is the causal comparative research. A causal comparative research looks at the conditions that already exist in the two countries Kenya and Australia (Victoria). Besides, it attempts to determine reasons, or causes for the current status of the phenomena under study. Accordingly to Gay (1996), causal comparative or ex post facto (after the fact) research is that research in which the researcher attempts to determine the cause, or reason for existing differences in the behaviour or status of groups of individuals. This kind of research does not recommend manipulation of the respondents, which is exactly what happened in this research. The views were obtained without manipulation from the groups being researched.

Epistemology of the study

Epistemology is a branch of philosophy concerned with theory and knowledge (Flew 1999 cited in Martin 2003). It deals with the nature of and derivation of knowledge, the scope of the knowledge and the reliability of the claims of knowledge (Crotty 1998, Martin 2003). The study is inclined towards the constructivist's school of thought. Constructivism is philosophy founded on the premise that by reflecting on our own experiences, we construct our understanding of the world that we live in. It is a phenomenological orientation to inquiry in which 'meaning' is the prime focus. Guba and Lincoln (1989 and 1990) suggest that constructivism is a viable paradigm for the study of human interaction, under which this study falls. Thus in constructivism, there is no objective truth waiting for us to be discovered. The guiding principle for this school of thought is that truth and meaning come into existence from our engagement with the realities of our world. The emerging truths then get into our experiences and influence the continued engagement with the world's realities. In this view, there is no meaning without mind. Further this school of thought states that meaning is not discovered but

constructed (Crotty, 1998). This view takes the cultural differences into consideration. As a result, it acknowledges the fact that different people may construct meaning in different ways even in relation to the same phenomenon. This is precisely what happens when we move from one era to another or even from one culture to another. The subject and the object emerge as partners in generating meaning. It's an integrationist's view of the truth. This being the case, the findings in this research are discussed in the light of the constructivist's frame of mind.

Respondents

The study was done on a total of 83 trainees in the automotive field. There were 44 (53%) trainees from Kenya and 39 (47%) trainees from Victoria in Australia. The trainees were enrolled for different courses in the automotive field. Some were pursuing diploma in automotive engineering while others were pursuing courses leading to certificate qualification within the automotive field. There were no distinctions made about the courses being pursued in the responses sought. The main requirement was that each of the trainees should either have been on apprenticeship in a firm or had taken the industry placement (industrial attachment) within an automotive firm. There was no sampling involved in the choice of who were given the questionnaires. As long as they were willing and pursuing a course in automotive engineering, they were supplied with the questionnaires. This reduced the undesired aspect of breaking intact groups, which may cause problems in the organisation of the training programs. Interviews were conducted to a smaller portion of the population to confirm their opinions. Willingness of the trainees to participate in the data collection again determined inclusion in the interview category. Purposive sampling (Bogdan & Biklen 2003) was used in getting the respondents for this research. This sampling method was favoured due to its potential of maintaining human dignity while still gathering the research results. This is a condition that must be fulfilled for the purposes of ethical treatment of human subjects. Ten trainees were interviewed informally in each group.

Methods of data collection

No single source of information is trusted to provide a comprehensive perspective in any study program. In this line of thinking, Patton (1990) comments that using a combination of data sources and methods of collection is a validating aspect and cross checks the data. The use of combined data sources like interviews, observations and document analyses increases the validity since the strength of one approach compensates for the weakness of another approach (Patton, 1990; Denzin & Lincoln 1998). This is called triangulation derived from a three-side polygon (triangle), which happens to be a strong shape in resisting forces. On the strength of this argument, several methods were used to collect data for this research. They include researcher designed questionnaires; observation; documents analysis and interviews guided by interview schedules. However the data discussed in this paper is from questionnaires. The justification for triangulation in this study is based on the premise that it is an ideal method because it is a means of controlling the extraneous variables (Denzin & Lincoln 1998).

Data analysis procedures

Data were analysed by use of different methods depending on its type. Both quantitative and qualitative methods of data analysis were applied. The reason for using both of these methods is that they are viewed as complementing and not opposing. The two approaches yield better understanding of the issue at hand and justify any claim that is made with some degree of certainty. Moses (2002) supports this view by saying that qualitative and quantitative research methods ought (and can not) be distinguished and set in opposition to one another on the grounds that quantitative methods are inherently and exclusively positivistic and suited only for confirmation whereas qualitative methods are suited only for understanding. In this research both modes of data analysis are used taking into consideration the strengths and the limitations of each approach and capitalising on the strengths for the best result. Statistical methods were applied to the relevant data and the rest of the findings were discussed. The statistical method that was used in this study was the Chi-square test for two independent samples on non-parametric data. The 0.05 level of significance testing was for all the statistical tests. Data were analysed by use of Statistical Package for Social Sciences (SPSS).

The Quantitative Response Items

The questionnaires had two sections. The first section had statements with options ranging from strongly agree to strongly disagree. This is a Likert type of scale, which is a type of summated scales (Burns 2000, Kothari 2003). Generally, Likert scale statements consist of a number of items, which express either a favourable or unfavourable attitude towards the aspect being considered and for this case; it was the institute based automotive training. The trainees indicated agreement or disagreement with each of the items in the study. The responses of the trainees on the Likert type of questions were analysed one question after the other. Analysis was also done comparing the two groups that were involved in the study with the view of trying to uncover any differences and similarities between the two groups.

There were eleven (11) items to which the trainees were supposed to respond according to the keys given. An introductory statement was offered to the trainees to inform them that none of the responses was correct or wrong. The statement only sought to expose the opinion of the respondents. The trainees responded by ticking or circling one of the following: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) for each statement. These responses were given quantitative values (Kothari 2003) as follows. SA was given the value of 5, A was given the value of 4, U was given a value of 3, D was given the value of 2 and SD was given the value 1. This is a slanting scale (Likert scale) ranging five to one.

Interpretation

A mean score value above three (3) denoted positive opinion (Kothari 2003) of the group to the statement that they were responding to. A mean score of value below three (3) implied that the opinion of the group was negative to the statement that they were responding to. A mean score of three was an indecisive score and no conclusion could be drawn out of such case as relates the item. However this indecisiveness is discussed in the discussion section of the analysis. This is the choice that was made by the respondents who felt not competent enough to respond to the issue that had been raised or had additional information as regards the item. It was the option for being undecided that showed that the opinion was neither positive nor negative, it showed a neutral opinion.

Data analysis

Data were analyzed according to the question and the issue that was raised in the question. Data was first keyed into computer software and several modes of trial analysis were conducted to reveal and relationship, differences and issues of common concern. This trial was also meant to expose the best methods of the results presentation for clear understanding to the readers. The statistics used in the data analysis are the mean, mode, standard deviation. The Chi square tests were conducted on the obtained statistics for two independent samples. The chi-square test does not require the condition that the subjects to be randomly sampled. This chi-square was chosen because it is not possible to ascertain that the characteristics of the respondents formed a normal distribution, which is a requirement of most other statistical methods. Data obtained was also non parametric and chi-square is a strong method in analyzing such data. It was not possible to ascertain normal distribution condition due to the fact that the selection process was not purely random. Sampling in this case was purposive. Willingness to participate in the research, which is an ethical consideration counted more than just random selection of the respondents. The outputs obtained from the software are reported in form of line and clustered bar graphs, histograms with the normal curve, mean plots and cross tabulations where applicable. The data was then compared for the different groups with a view of getting the emerging themes. In this paper some of the graphs are left out although their characteristics are described.

Quantitative data statements

There were eleven statements to which the trainees were requested to rate on a Likert slanting scale. From these statements, several themes for discussion were developed. Each theme was discussed citing current literature and justification of the orientation taken based on the world today. The results found for each section discussed are discussed separately as well as well giving a comparative analysis. In this paper, only two main themes from three statements are discussed.

Theme one: Does training emphasize on generic or transferable skills?

The first main theme tested in this section of the research is if the training was promoting acquisition of generic and transferable skills by emphasizing on personal values like honesty, communication and positive self-esteem and problem solving. The reason for this statement is that the work place (automotive industry for this case) is now demanding these skills (Virgona, Waterhouse, Sefton & Sanguinetti 2003, ANTA 1998) just as much as the engineering skills (Allen consulting group 1999). They are also important for higher education (Hager, Holland & Beckett 2002). In fact generic skills are accepted by all VET stakeholders as critical components in training and must be actively promoted (Clayton, Blom et al 2003). Besides the repair section is getting quite competitive in the sense that the workers there should be able to communicate with the customers with confidence. There is need also for the trust to exist between the mechanic and the car owners, a virtue that training should foster, but is developed from other skills like the ability to communicate the repair intentions and procedures.

Results for theme one

The distribution of the trainees' responses (83) showed a positive to the statement. The mean score to this item for the total 83 trainees was 3.8. This implies that most trainees were of the opinion that the statement was correct. The most selected option (mode) was (A) agreeing. The total positive opinion to this statement was 72.3 % (60). This is obtained by combining the responses for SA and A. When this information was plotted on a bar chart with the normal curve, it was observed that the curve tends to be negatively skewed. The response was inclined towards the positive opinion to the statement made. The negative opinion was 15.6 % (13) while the undecided option scored 12% (10).

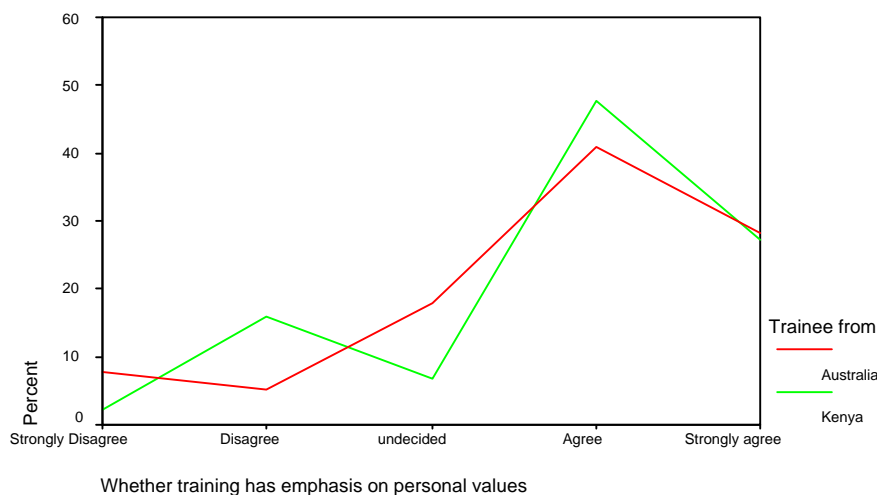


Fig 1: Distribution of Trainees' responses on whether training has emphasis on personal values.

This information was then put into a histogram with normal curve and it was found that the distribution was negatively skewed. This implies that most of the responses are located above the mean of the distribution. When cross tabulation were done, there was variation observed in the distribution of the two groups' responses according to the percentages. The line graphs for the two groups show this variation (Fig 1). The green line (Light line in black and white) represents views by trainees from Kenya while the red line (bold line in black and white) represents views by trainees from Australia.

Higher percentage of trainees from Australia strongly disagreed with the statement compared to trainees from Kenya. However there were more trainees from Kenya who disagreed with the statement compared to trainees from Australia. There were more of Australian trainees who were undecided about the statement than Kenyan trainees. The agree choice was picked by more Kenyan trainees than the Australian trainees and finally slightly more Australian trainees picked the strongly agree choice compared to Kenyan trainees. The organisation of the training and its emphasis may account for this distribution. The Australian training is biased towards the skill (ability to do) with little support courses while the Kenyan training has more for the supporting sciences leaving less time for skill's practice and acquisition. This is witnessed from the nature of evaluation that is organised for the trainees.

This distribution of the responses for the two groups is quite intertwined. It was therefore necessary to do a mean plot of the two groups, which is shown in figure 2.



Fig 2: Plot of group means regarding whether training has emphasis on personal values

The mean for trainees from Kenya was 3.82 compared to the mean score for trainees from Australia of 3.77 on a five-point scale. The values are all positive to the statement although different. The difference between the mean of the two groups is 0.05, which is not significant, a result obtained from the Chi Square test for significant difference at the 0.05 level of significance testing. This shows that the responses by the two groups are related. Their views about the emphasis of the curriculum are tallying.

Discussion for theme one

A generic (transferable) skill is one which is not specific to work in a particular occupation or industry, but is important for work, education and life generally, e.g. communication skills, mathematical skills, organisational skills, computer literacy, interpersonal competence, and analytical skills (Knight & Nestor 2000, ANTA 1998, Mayer 1992). Other terms used to refer to these skills are key competencies and employability skills (Smith & Comyn 2003). Their characteristic of wider applicability means that these competencies are not only essential for participation in work, but are also essential for effective participation in further education and in adult life more generally (Field 2002, Mayer 1992).

Given the importance that aspects of generic skills have to the development of individuals' potentials, it is imperative that all training programs should foster them. They can be summarised, (Mayer's 1992; Field 2002) by seven-point outline of the qualities that should be developed. First are communication skills that contribute to productive and harmonious relations between employees and customers. The second aspect is teamwork skills that contribute to productive working relationships and outcomes. Third category is Problem solving skills that contribute to productive outcomes Initiative and enterprise skills that contribute to innovative outcomes. The fourth one is planning and organising skills that contribute to long term and short term strategic planning. The fifth point is Self-management skills that contribute to employee satisfaction and growth. The sixth aspect is learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes and finally, technology skills that contribute to effective execution of tasks (Smith & Comyn 2003).

These seven points have a special place in the automotive industry, which was the focus of this research. Having a training that is focused at developing these skills will as well promote the desirable virtues for all work place. They include ability to deal with pressure, commitment, positive self-esteem, personal presentation, honesty and Integrity sense of humour, reliability, enthusiasm, and of all the others adaptation to change.

While most trainees in both countries agree to some extent that training has emphasis on personal skills, there were some who disagreed. The few who did not agree with statement should be cared for in the program design. This is especially so because education and training should not just cater for the majority but the minority too. From the interview sections, it was revealed that training in Australia was biased towards some car manufacturers and not others. Something should be done to improve this case. In Kenya, it was revealed that training is not so keen on any aspect that can be examined directly. Trainers devoted most of their efforts towards the passing of the examination. This is a misconception since training should aim at developing the potential of the trainees in order to face future challenges.

Theme two: training and coping with changes in technology and, need for retraining at work place

The second issue that was raised in the questionnaire for the trainees was whether training within the institute was helping them in the coping with technological changes at the work place. The statement was “The training in this institution enables one to cope with the technological changes in the work place”. The mean for this statement was 4.1; the median and mode were 4.0. This implies that most of the trainees thought that training within the institution was enabling them to cope with technological changes in the work place.

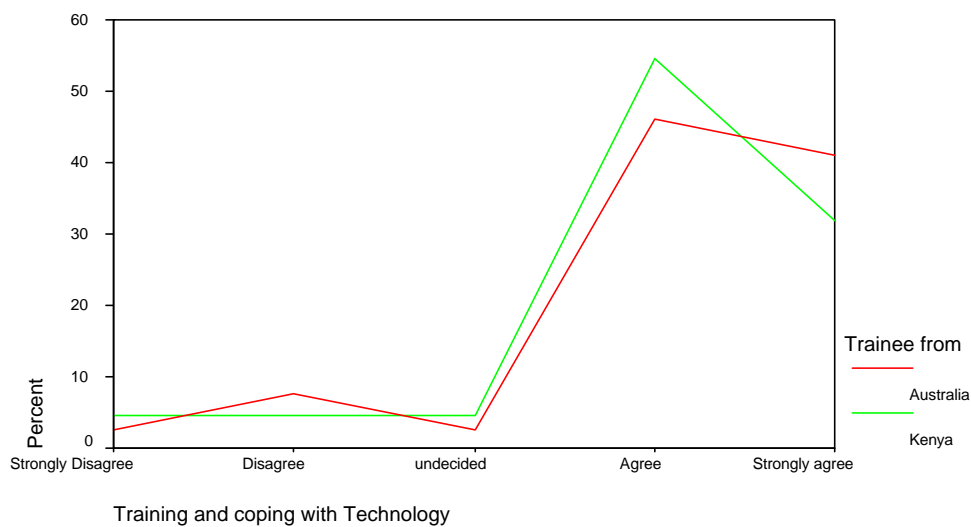


Fig 3: Distribution of Trainees' responses on whether training facilitates coping with technology changes at the work place.

A total of 86.7% of the trainees were in support of the statement. They chose either agree (50.6%) or strongly agree (36.1%). These responses were then placed on a histogram with normal curve to check how skewed they were. The distribution is also negatively skewed implying that the trainees were positive about the statement. To check on whether the two groups were the same in the distribution, a line graph for each group was plotted (Fig3). The red line (bold in black and white) was for Australian trainees and the green line for the Kenyan trainees

The distribution is that Australian trainees were more in Disagreeing and strongly agreeing while Kenyan trainees were more in Strongly disagreeing, being undecided and agreeing. This was not enough to decide on whether the two groups were significantly different. As a result, it was necessary that a plot of the means be generated (Fig 4).

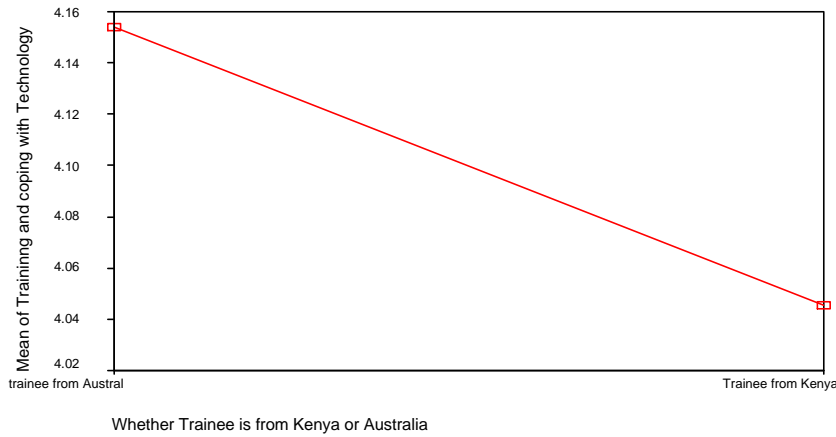


Fig 4: Plot of group means regarding whether training facilitates coping with changes in technology at the work place

It was necessary again to find out if the distribution was significantly different for the two groups involved. The chi square test was conducted. The grouping variable that was used is whether the trainee was from Kenya or Australia. The value for the asymptotic significance obtained (0.463) is greater than the level of significance testing which in this case was 0.05 used in the whole research. This shows that the test result is within the acceptance zone hence the null hypothesis that “There is no significant relationship between the distributions of the responses of the two groups involved in the study on whether training helps trainees in coping with technology.” was rejected. Since the null hypothesis is rejected, then there is a relationship between the responses of the two groups. The views of the two groups are related in a significant way.

On the issue of training on the job the statistics obtained for this item were mean 4.28, mode 5 and standard deviation of 0.958. It implies that most of the trainees were of the idea that there is need for job training even after the institutional training. It was found that 86.7% (72) trainees selected either Agreeing (A) or strongly agreeing (SA) options. Only 6% (5) of the trainees were undecided about this item. Another 7.2% (6) selected either strongly disagree (SD) or disagree (D) options for this particular item. The information about this item was then put in a histogram with normal curve for skewness test. It was observed that the distribution is negatively skewed.

To establish if the distribution was the same for the two groups involved in the study, the line for each group was then generated (Fig 5). It can be seen from the graph that the distribution of the two groups are interacting. The Australian trainees were high in strongly disagreeing (SD) and agreeing while the Kenyan trainees were high on disagreeing (D), being undecided (U) and strongly agreeing (SA). The plot of means showed Kenyan trainees on the issue having a value of 4.38 while the mean for the Australian trainees was 4.15.

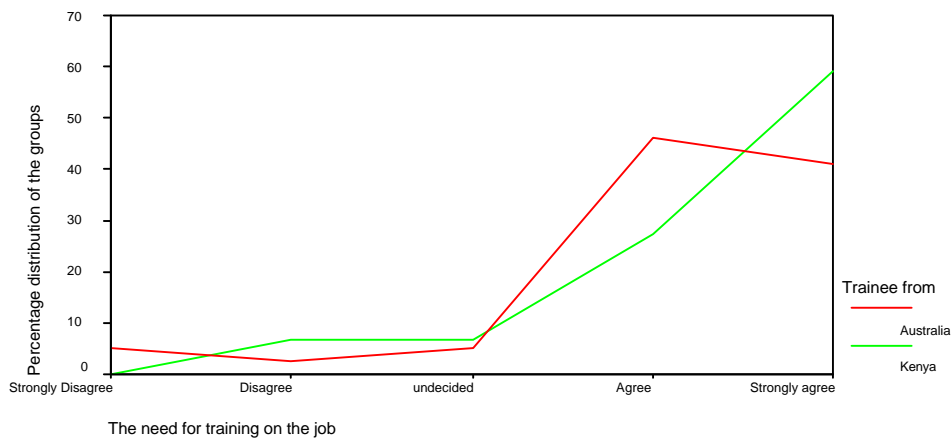


Fig 5: Distribution of Trainees’ responses on whether there is need for training at the work place after institute-based training

It was necessary to establish if this difference between the means of the two groups was significant. As a result, the data was subjected to a statistical test to find if the difference was significant. The test statistic shows that the observed value (0.086) is greater than the value for the level of significance testing ($\alpha = 0.05$) used in the research. As a result of this, the null hypothesis for the item was rejected. The null hypothesis for this item was that "There is no significant relationship between the distribution of responses for the Australian and Kenyan trainees on the need for on the job training after institution based training". This means that there is no significant difference between the distributions of the responses of the two groups on the need for training at the work place. However there were differences that can be explained by literature looking at each of the group's distribution of the response.

Discussion for theme two

The work place is one of the fastest changing in the world today; making Skills and knowledge are the engines of economic growth and social development (ILO 2003). The shift is towards high technology, service oriented and self-directed work teams (Hull 1997). This justifies why the research was looking at the retail service and repair (RS&R) section of the automotive industry, which requires more and varying skills for the mechanics than the manufacturing sector. Globalisation and the rise of communication and information technology are having marked impact on organisation and the individuals that work within them (Mitchell, Wood & Young 2001). The automotive industry is not shielded from these influences. The nature and work practice is also changing, thereby demanding changing skill levels (Billett 2001, ILO 2003). It is highly susceptible to technology changes and the world at large. Technological change and other changes stemming from globalisation of economies around the world are now having a profound impact on the nature of work, the way it is organised and the skills it requires ((Virgona, Waterhouse, Sefton & Sanguinetti 2003; Robinson 2000, Billett 2001). As the technology changes, there is need for training institutions to change in their ways of training to cater for the changes.

One critical skill that trainees require for the work place is the ability to learn rapidly and be innovative (Virgona, Waterhouse, Sefton & Sanguinetti 2003). In addition, there is need for trainees to have skills that enables them to move from one job to another or adapt to the changes at the work place. These changes in the work require the trainees and workers in general to respond to new tasks, to understand new concepts and develop new procedures (Billett 2001) all of which make the work more demanding. On this issue Robinson (2000) further says that Continuous retraining for more complex work and the transfer of high-level skills gained in the workplace context needs to be underpinned by attitudes and learning skills gained in the education system prior to entry to the workforce. This fits squarely to the current research and is the theme that is targeted.

It is with this view that Whittingham (2003) proposes that VET providers should consider their investment in pre-emptive or just-in-time vocational education and training to meet the market need when it occurs, not after the need has been established, proven and possibly moved on. In addition, they should provide trained workers who can articulate their needs, be aware of cultural differences, undertake problem solving and participate in teamwork. These two challenge the common trend of training not being futuristic (Peters & Lloyd 2003). Many are the times that training program prepare for the current needs which are obsolete by the end of training (Kitaike 2003). It is expected that training today should help the participants in coping with the changes in the future. Due to the changes at the work place, there is need to have trainees who are adaptive to new situations, who can manage increased intensity of work as a result of competition and workers who are able to attend to a number of demanding activities (Billett 2001, Virgona, Waterhouse, Sefton & Sanguinetti 2003).

The main concerns of these two items were to find if training was preparing trainees for the changes in technology and if retraining at the workplace was necessary. The greater percentage of the trainees was fine with the issue. However another high percentage was not satisfied. This is an indication that although much is in place, there is still some work to be done in the refining of the training to take care of these crucial aspects. A greater percentage of the Kenyan trainees disagreed with the issue that their training was enhancing their coping with technology. This is confirmed with still a higher percentage that there is need for training at the work place. This can be explained by the organization of the

training programs in the two regions. The satisfaction level is quite high with the trainees in Australia in line with the statistics survey for 2003 that 82% of graduates and 76% of module completers were satisfied with the overall quality of their TAFE training. This can be explained by the fact that there is high participation of the work place (industry) in education and training matters, which is quite low in Kenya. Kenyan industry participation was found to be lacking in the programs design, and surely more can be done.

General discussion

In this section, I will try to answer the initial question that was posed at the paper title 'is institute based training for the future according to the views of the trainees?' To start with, there are three main themes that are discussed. All themes have some aspects reflecting on to the future of the trainees.

The first theme on generic skills is aimed at getting to know the state of affairs according to the trainees about generic skills. It is not quite explicit to find some of the transferable or generic skills being stated as part of the program achievements. They are assessed (Clayton, Blom, Meyers & Bateman 2003) (and may be taught) holistically as part of the overall assessment of these vocational competencies hence their achieving is inferred rather than explicitly measured. This being the case, then it is only the trainees who can justify the achievement of these generic skills.

Going back to the general distribution of the responses for the generic skills items, it was realised that the greater majority of the trainees were happy with the levels of achievement. However, Australian trainees complained about the program being pegged on some car manufacturers and not others. This aspect exposed the missing link for general training with examples drawn from a variety of manufacturers. This was especially so with the Australian trainees. The Kenyan trainees complained about the training not being focused to the work situations. The training is focused towards examinations that happen to have more theory than practice. These two cases then pave way for the opinion that training should be broad but related to the work place. Too much breadth without situating the training is harmful while too much localising of the training without providing for variety is also limits the cross industry movement of the trainees.

The second theme dealt with training and coping with changes in technology with consideration for the need for retraining at work place. This theme is broad and is based on the fact that technology is changing especially at the work place. It was found that most trainees were satisfied with the training and coping with changes in technology. However, they contented that there was need for training at the work place after the institute-based training. Some of the reasons they cited for this need were the workplace has varying tasks that are not linear in nature like the practical sessions in institute based training where trainees have time set for particular topics. In the work place tasks are varying and require high level of organisational skills to cope with the demands of the customers and have the dollar value of the work done. The work place facilities are also advanced compared to the training facilities. Here are differences existing between the two groups of trainees. The Australian trainees were more prepared to face the changes at the work place than the Kenyan trainees. Consequently, the Kenyan trainees required more training at the work place compared to the Australian trainees. These requirements reflect on the organisation of the training and the mode of assessment used. Competency based training prepares trainees for the challenges at the work place better than the time based, theory examined training. These discrepancies also echo the voices of the Kenyan trainees that the practical exposure is limited within the training. They mentioned that teachers concentrate more on theory in preparing trainees for examinations.

Conclusion

Based on the findings of this section of the study, the following recommendations can be advanced to the stakeholders. First, the trainees know what they are after in training so their views should be sought for before making decisions related to their own training. The second aspect is that training should be broad to cater for all the work places with examples of particular work. All the industry players must be represented in designing the training programs so that the trainees have a broad view. This training should however have the basic work characteristics so that trainees have the initial seed of confidence as they move into new workstations. Thirdly, learning should be not be viewed as the

domain for institutions. The work place should afford some learning situations (Billett 2001, Barnett 2002) for all workers both new and the experienced. In fact learning acquired independent of the work situation could be propositional in form, while learning acquired at the work place alone could be a matter of knowing how to get to similar circumstances (Barnett 2002). Effective work seems to require both kinds of learning: knowing that certain things are the case and coming to intuit the particular 'form of life' (Wittgenstein 1978 in Barnett 2002). An example knowing why and how adjusts the valve clearance in a vehicle engine.

Related to the discussed themes, the recommendations are that training should have more time and emphasis on the generic skills and make it explicitly known that they are just as important as the real skills of repairing the cars. Training should also provide for the changes in technology by being flexible, and accommodative to the world changes. The training institutions should ensure that changes in the work place are taken care of in the planning and delivery of the training programs. One way of facilitating this is by having the trainers undertake refresher courses and work experiences within the work place. Introduction of new models in the work place should also involve trainers in the briefs about the models. Finally, the training institutions should have model work places so that the trainees are exposed to more specialised equipment. Trainees become better workers when dealing with familiar environment. Having facilities that are similar to the workplace in training institutions will go a long way in promoting the trainees' confidence at work. The final recommendation from this section of the research is that systems, Kenya and Australia can still be improved. Australia may introduce more elaborate methods of measuring the achievement of generic skills while maintaining high level of the technical skills while Kenya may include more technical skills and have more generic skills while maintaining the support sciences that are already in place. Training in both countries has aspects about the future but does not fully cater for the future requirements.

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