CHAPTER 6

CONCLUSION

6.1 INTRODUCTION

The summary of findings, contributions of the research, limitations of the research and suggestion for future work and concluding remarks are hereunder presented.

6.2 SUMMARY OF FINDINGS

The findings of the present research are summarised as below:

6.2.1 Leadership Quality Practices in Autonomous Polytechnic Colleges in Tamil Nadu

- The results show that about 88.50 per cent of faculty members are males while the rest of 11.50 per cent of faculty members are females. The results indicate that about 52.00 per cent of faculty members of autonomous polytechnic colleges in Tamil Nadu belong to the age group of 41-50 years followed by 31-40 years (41.00 per cent), more than 50 years (5.50 per cent) and less than 30 years (1.50 per cent).

- It is clear that about 68.00 per cent of faculty members are post graduates followed by doctorates (23.50 per cent) and under graduates (8.50 per cent). It is observed that about 79.00 per cent
of faculty members belong to the engineering department, while, the rest of 21.00 per cent of faculty members belong to the humanities department. It is apparent that about 72.50 per cent of faculty members are lecturers followed by head of the departments (23.00 per cent) and principals (4.50 per cent).

• The weighted mean for leadership direction shows that the faculty members of autonomous polytechnic colleges in Tamil Nadu are strongly agreed with senior leaders set institutional values and senior leaders create an environment for equity to all students, while they are disagreed with senior leaders create an environment for empowerment.

• The results further indicate that senior leaders communicate institutional values to others, senior leaders create an environment for faculty member and staff member learning, senior leaders create an environment for innovation and senior leaders create an environment for safety to all are agreed by them while, the faculty members are neutral with senior leaders deploy institutional values, senior leaders create an environment for value addition to the programmes, senior leaders create an environment for institutional learning and senior leaders create an environment for institutional agility.

• The F-value of 23.546 is statistically significant at five per cent level indicating that there is a significant difference between the leadership directions among the faculty members of autonomous polytechnic colleges in Tamil Nadu.

• The weighted mean for organizational governance indicates that principal’s accountability for the actions taken by him is very
good and faculty member member’s accountability for the actions taken by them is very good are strongly agreed, while senior leaders protect the interest of faculty member and staff member members are strongly disagreed by the faculty members of autonomous polytechnic colleges in Tamil Nadu.

- It is further clear that financial audits are carried out in free and fair manner, academic audits are carried out in free and fair manner and senior leaders protect the interest of students are agreed while, administrative staff member member’s accountability for the actions taken by them is very good is disagreed by them. The faculty members are neutral with principal’s financial accountability for his financial transactions are very good and HOD’s financial accountability for his financial transactions are very good.

- The F-value of 18.286 is statistically significant at five per cent level indicating that there is a significant difference in organizational governance in autonomous polytechnic colleges in Tamil Nadu.

- The weighted mean for organizational performance review shows that the faculty members of autonomous polytechnic colleges in Tamil Nadu are strongly agreed with individual subjects result analysis are carried out semester - wise and individual faculty member member’s performance is carried out department - wise whereas comparative analysis of competitors’ performance is carried out and senior leaders use this analysis to assess their own leadership quality are disagreed by them.
• It is also observed that placement record analysis is carried out department-wise, results of the analysis is used to assess the ability to address future needs senior leaders use this analysis to identify the priority areas to improve and senior leaders use this analysis as an opportunity for innovation are agreed and the faculty member members are neutral with progress analysis is carried out relative to vision and mission statements.

• The F-value of 16.892 is statistically significant at five per cent level indicating that there is a significant difference in organizational performance review in autonomous polytechnic colleges in Tamil Nadu.

• The weighted mean for social responsibility and ethics shows that special measures are adopted for achieving regulatory, safety, accreditation and legal requirements and key communities are identified for support and upliftments are strongly agreed by the faculty members of autonomous polytechnic colleges in Tamil Nadu.

• It is also apparent that public concerns on current programmes, offerings and services are addressed in a protective manner and community development activities are carried out with full involvement are agreed and the faculty member members are neutral with significant positive change on the society due to this educational service and ethical behaviour like public disclosure of information, staff member training, integrity of evaluation and equal access to resources is at high level.

• The F-value of 14.654 is statistically significant at five per cent level indicating that there is a significant difference in social
responsibility and ethics of autonomous polytechnic colleges in Tamil Nadu.

- The results show that the t-value of 12.765 for leadership direction-organizational governance is significant at one per cent level. Hence, there is a significant difference exiting between leadership direction and organizational governance in autonomous polytechnic colleges in Tamil Nadu.

- The t-value for leadership direction-organizational performance review is 11.634 and it is significant at one per cent level. It indicates that there is a significant difference between leadership direction and organizational performance review in autonomous polytechnic colleges in Tamil Nadu.

- The results also indicate that t-value for leadership direction-social responsibility and ethics is 13.927 and it is significant at one per cent level. Therefore, there is a significant difference between leadership direction and social responsibility and ethics in autonomous polytechnic colleges in Tamil Nadu.

- The results show that the t-value of 12.046 for organizational governance-organizational performance review is significant at one per cent level. Hence, there is a significant difference exiting between organizational governance and organizational performance review in autonomous polytechnic colleges in Tamil Nadu.

- The t-value for organizational governance-social responsibility and ethics is 13.023 and it is significant at one per cent level. It indicates that there is a significant difference between
organizational governance and social responsibility and ethics in autonomous polytechnic colleges in Tamil Nadu.

- The results also indicate that t-value for organizational performance review- social responsibility and ethics is 11.879 and it is significant at one per cent level. Therefore, there is a significant difference between organizational performance review and social responsibility and ethics in autonomous polytechnic colleges in Tamil Nadu.

- The relationship between characteristics of faculty member and leadership quality practices in autonomous polytechnic colleges shows that gender is positively significantly correlated with age and organizational performance review while age is negatively significantly associated with leadership dimensions at one per cent level of significance.

- The results also show that gender is positively significantly associated with designation and it is negatively significantly correlated with social responsibility and ethics at five per cent level of significance.

- The age is positively significantly correlated with educational qualification, department, designation, organizational governance and social responsibility and ethics at five per cent level of significance.

- The educational qualification is positively significantly associated with department, designation, organizational governance and organizational performance review at one per cent level of significance. Besides the educational qualification
is negatively significantly correlated with leadership dimensions and social responsibility and ethics at one per cent level of significance.

- The correlation coefficients show that department is positively significantly correlated with leadership dimensions at one per cent level of significance while department is negatively significantly associated with organizational governance at one per cent level of significance.

- The designation is positively significantly associated with leadership dimensions while it is negatively significantly correlated with social responsibility and ethics at five per cent level of significance.

- The leadership dimensions are positively significantly correlated with organizational governance, organizational performance review and social responsibility and ethics at one per cent level of significance.

- The organizational governance is positively significantly associated with organizational performance review and social responsibility and ethics at one per cent level of significance and organizational performance review is positively significantly correlated with social responsibility and ethics at one per cent level of significance.

- The confirmatory factor analysis (CFA) for each dimensions of leadership quality practices in autonomous polytechnic colleges indicates that The leadership dimensions are presented by eleven items and based on results of the CFA. It indicates an excellent
fit with chi-square statistic of 4.824. The Goodness of Fit Index (GFI) is 0.99 and Comparative Fit Index (CFI) is 1.00. These GFI and CFI indicate perfect fit. The standardized Root Mean Residual (RMR) is 0.07 and Root Mean Square Error of Approximation (RMSEA) is 0.04 indicating excellent fit.

- The results of CFA for desired organizational governance indicate an excellent fit with chi-square value of 4.656 and GFI and CFI are greater than 0.90 and RMR and RMSEA values are less than 0.1 indicate excellent fit.

- The results of CFA for organizational performance review indicate an excellent fit with chi-square value of 5.261 and GFI and CFI are greater than 0.90 and RMR and RMSEA values are less than 0.1 indicate excellent fit.

- The social responsibility and ethics are presented by six items and based on results of the CFA. It indicates an excellent fit with chi-square statistic of 6.042. The Goodness of Fit Index (GFI) is 0.98 and Comparative Fit Index (CFI) is 0.99. These GFI and CFI indicate perfect fit. The standardized Root Mean Residual (RMR) is 0.05 and Root Mean Square Error of Approximation (RMSEA) is 0.04 indicating excellent fit.

- Besides the results show that composite reliability for leadership quality practices is above the cut off value of 0.70, average variance extracted is greater than the minimum value of 0.50 and discriminant validity is above 0.60 indicating that convergent validity is confirmed for leadership quality practices.
• The reliability test for dimensions affecting the leadership quality practices in autonomous polytechnic colleges shows that the Cronbach’s alpha of the scale for overall leadership quality practices is 0.86 indicating acceptable level of internal consistency. The Cronbach’s alpha is varying from 0.85 for leadership dimensions to 0.78 for social responsibility and ethics.

• The discriminant analysis indicates that values, faculty member learning, innovation, safety, interest of faculty member, quality and educational service discriminate best among three designations of the faculty members in autonomous polytechnic colleges. Based on the discriminant function, 86.50 per cent of the measures have been correctly classified.

6.2.2 Performance of Autonomous Polytechnic Colleges in Tamil Nadu

• The results show that about 70.50 per cent of students are males while the rest of 29.50 per cent of students are females. The results indicate that about 73.50 per cent of students of autonomous polytechnic colleges in Tamil Nadu belong to the age group of 16-17 years followed by 18-19 years (18.50 per cent) and 20-21 years (8.00 per cent).

• The results indicate that about 27.00 per cent of students belong to the Mechanical followed by Electrical and Electronics (23.00 per cent), Electronics and Communication (21.00 per cent), Civil (16.50 per cent) and Computer Science engineering (12.50 per cent).
• It is apparent that about 54.00 per cent of students choose a branch based on job opportunities followed by friends’ influence (19.50 per cent), personal interest (18.00 per cent) and parents’ influence (8.50 per cent) in autonomous polytechnic colleges.

• The selection criteria of autonomous polytechnic colleges in Tamil Nadu show that employment opportunities are very important criterion for selection of polytechnic college by the students of autonomous polytechnic colleges in Tamil Nadu, while students are neutral with safe environment for women.

• The other criteria of quality of teaching and faculty member, infrastructure facilities, opportunities for social activities, recruiter visit, quality of the programmes, friends are also interested in the college and availability of branches are important as perceived by the students of autonomous polytechnic colleges in Tamil Nadu.

• Besides reputation and prestige, appearance of campus, convenience of close to home, advertisement, recommendation of faculty members, parents’ recommendations and opportunities for extracurricular activities are also important as perceived by the students of autonomous polytechnic colleges in Tamil Nadu.

• The F-value of 29.754 is significant at five per cent level indicating that there is a significant difference among selection criteria of autonomous polytechnic colleges in Tamil Nadu.

• The factor analysis for the selection of autonomous polytechnic colleges by the students in Tamil Nadu shows that there are eight independent groups were extracted which account for a total of
66.92 per cent of variations on the 16 variables. The each of eight factors contributes 10.84 per cent, 9.50 per cent, 8.76 per cent, 8.32 per cent, 7.80 per cent, 7.35 per cent, 7.22 per cent and 7.13 per cent respectively.

- **Factor-I** consists of:
  - Quality of teaching and faculty member (0.68)
  - Infrastructure facilities (0.66)
  - Advertising (-0.78)

Hence, this factor is named as “**QUALITY**”.

- **Factor-II**: is formed with:
  - Quality of the programmes (0.67)
  - Availability of branches (-0.54)
  - Appearance of campus (0.63)

These variables are named as “**IMAGE**”.

- **Factor-III**: This factor includes:
  - Safe environment for women (0.65)
  - Opportunities for social activities (-0.76)

These three variables are named as “**RESPONSIBILITY**”.

- **Factor-IV**: This factor is formed with:
  - Recommendations of faculty member (0.78)
  - Parents’ recommendations (0.66)

This factor is named as “**RECOMMENDATION**”.
• Factor-V: This factor includes:
  • Employment opportunities (0.68)
  • Recruiter visit (-0.58)

The factor is named as “RECRUITMENT”.

• Factor-VI: This factor is formed with:
  • Reputation and prestige (0.84)
  • Convenience of close to home (-0.59)

This factor is named as “VALUE”.

• Factor-VII: This factor includes:
  • Opportunities for extracurricular activities (0.73)

The factor is named as “EXTRA CURRICULUM”.

• Factor-VIII: This factor is formed with:
  • Friends are also interested in the college (0.55)

This factor is named as “FRIENDSHIP”.

• The reliability coefficient for selection criteria of autonomous polytechnic colleges in Tamil Nadu is 0.88 indicating that each measure demonstrated acceptable internal consistency.

• The weighted mean for students focused results of autonomous polytechnic colleges in Tamil Nadu shows that the students of autonomous polytechnic colleges in Tamil Nadu are strongly agreed with loyalty to the institution is very high, while they are agreed with overall satisfaction is very good.
• The F-value of 6.729 is statistically significant at five per cent level indicating that there is a significant difference between the students focused results in autonomous polytechnic colleges in Tamil Nadu.

• The weighted mean for faculty member focused results of autonomous polytechnic colleges in Tamil Nadu indicates that both overall satisfaction is very good and loyalty to the institution is very high are agreed by the faculty members of autonomous polytechnic colleges in Tamil Nadu.

• The F-value of 5.284 is statistically significant at five per cent level indicating that there is a significant difference in faculty member focused results in autonomous polytechnic colleges in Tamil Nadu.

• The weighted mean for institutional effectiveness results of autonomous polytechnic colleges in Tamil Nadu shows that the meritorious admission students are improving year by year are strongly agreed whereas service to students and support to student community is very good are agreed by the faculty members.

• The F-value of 4.982 is statistically significant at five per cent level indicating that there is a significant difference in institutional effectiveness results of autonomous polytechnic colleges in Tamil Nadu.

• The weighted mean for governance and social responsibility of autonomous polytechnic colleges in Tamil Nadu indicates that environment and safety activities are very good is strongly
agreed and high standard of conduct is maintained in the campus is agreed by the faculty members of autonomous polytechnic colleges in Tamil Nadu. Besides they are neutral with funds are utilized appropriately and support to rules and regulations and legal compliance is very good.

- The F-value of 7.456 is statistically significant at five per cent level indicating that there is a significant difference in social responsibility and ethics of autonomous polytechnic colleges in Tamil Nadu.

- The results show that the t-value of 4.238 for students focused results- faculty member focused results is significant at one per cent level. Hence, there is a significant difference exiting between students focused and faculty member focused results in autonomous polytechnic colleges in Tamil Nadu.

- The t-value for leadership students focused results-institutional effectiveness results is 3.973 and it is significant at one per cent level. It indicates that there is a significant difference between students focused results- institutional effectiveness results of autonomous polytechnic colleges in Tamil Nadu.

- The results also indicate that t-value for students focused results-governance and social responsibility results is 3.654 and it is significant at one per cent level. Therefore, there is a significant difference between students focused and governance and social responsibility results of autonomous polytechnic colleges in Tamil Nadu.
• The results show that the t-value of 4.182 for faculty member focused results- institutional effectiveness results are significant at one per cent level. Hence, there is a significant difference exiting between faculty member focused results and institutional effectiveness results of autonomous polytechnic colleges in Tamil Nadu.

• The t-value for faculty member focused results- governance and social responsibility results are 3.629 and it is significant at one per cent level. It indicates that there is a significant difference between faculty member focused and social responsibility results of autonomous polytechnic colleges in Tamil Nadu.

• The results also indicate that t-value for institutional effectiveness results - governance and social responsibility results is 11.879 and it is significant at one per cent level. Therefore, there is a significant difference between institutional effectiveness results and governance and social responsibility results of autonomous polytechnic colleges in Tamil Nadu.

• The relationship between characteristics of students and performance results of autonomous polytechnic colleges in Tamil Nadu shows that gender is positively significantly correlated with age, branch and students focused results and negatively significantly associated with governance and social responsibility results at one per cent level. The results further show that gender is positively significantly associated with reasons for choosing the branch and negatively significantly correlated with institutional effectiveness results at five per cent level.
• The results show that age is positively significantly associated with branches, reasons for choosing the branch and students focused and institutional effectiveness results at one per cent and five per cent respectively and it is also negatively significantly associated with governance and social responsibility results at five per cent level.

• The branch is positively significantly correlated with reasons for choosing the branch, students focused and faculty member focused results at one per cent level of significance.

• The reasons for choosing the branch is positively significantly associated with students focused results and are negatively significantly correlated with governance and social responsibility results at five per cent level.

• The correlation coefficients show that students focused results are positively significantly correlated with faculty member focused, institutional effectiveness and governance and social responsibility results at one per cent level of significance.

• The faculty member focused results is positively significantly associated with institutional effectiveness and governance and social responsibility results at one per cent level of significance.

• The result show that institutional effectiveness results is positively significantly associated with governance and social responsibility results at one per cent level of significance.

• The discriminant analysis for performance results indicates of student’s satisfaction, faculty member’s satisfaction, service to
the students and environment and safety discriminate best among five branches of the students in autonomous polytechnic colleges in Tamil Nadu. Based on the discriminant function, 78.00 per cent of the measures have been correctly classified.

- The relationship between leadership quality practices and performance results of autonomous polytechnic colleges in Tamil Nadu indicates that there is a meaningful positive correlation between leadership quality practices and performance results in autonomous polytechnic colleges in Tamil Nadu.

- The results also show that leadership direction is positively significantly correlated with students focused results and institutional effectiveness results at one per cent level and it is positively significantly associated with faculty member focused results and governance and social responsibility results at five per cent level of significance.

- The correlation coefficients indicates that organizational governance is positively significantly associated with faculty member focused results and institutional effectiveness results at one per cent level and is positively significantly correlated with student focused results and governance and social responsibility results at five per cent level of significance.

- The correlation analysis further shows that organizational performance review is positively significantly correlated with student focused results, faculty member focused results and governance and social responsibility results at one per cent level, while it is positively significantly associated with institutional effectiveness at five per cent level of significance.
• The results indicate that social responsibility and ethics is positively significantly associated with institutional effectiveness at one per cent level of significance and it is positively significantly correlated with student focused results, faculty member focused results and governance and social responsibility at five per cent level of significance.

• The path analysis for the inter-relationship between leadership quality practices and performance results of autonomous polytechnic colleges in Tamil Nadu indicates that the path coefficient for leadership direction against organizational governance is 14.720 with p-value of 0.001 and the path coefficient for organizational governance against organizational performance review is 15.827 and the path co-efficient for organizational performance review against social responsibility and ethics is 11.779 with p-value of 0.000 and the path co-efficient for leadership direction against organizational performance review is 13.289 and the path co-efficient for organizational governance against social responsibility and ethics is 11.661 and the path co-efficient for leadership direction against social responsibility and ethics is 9.324 indicating that there are significant at one per cent level.

• Meanwhile, the path co-efficient for performance against leadership direction is -0.159 and the path co-efficient for performance against organizational performance review is 0.010 with p-value of 0.000 indicating that these are significant at one per cent level. However, the path co-efficient for performance against organizational governance is 0.120 and the path co-efficient for performance against social responsibility and ethics
is 0.116 at five per cent level of significance showing that leadership quality practices except leadership directions are significantly positively directly influencing the performance results of autonomous polytechnic colleges in Tamil Nadu.

- The fitness of model indicates an excellent fit with chi-square statistic of 53.135. The Goodness of Fit Index (GFI) is 1.00 and Comparative Fit Index (CFI) is 1.00. These GFI and CFI indicate perfect fit. The standardized Root Mean Residual (RMR) is 0.05 and Root Mean Square Error of Approximation (RMSEA) is 0.02 indicating excellent fit.

6.3 CONTRIBUTION OF THE RESEARCH

The present research has identified the dimensions of leadership quality practices needed for providing conducive and creative learning environments for both faculty members and students in autonomous polytechnic colleges. The research has also identified key performance focused results for both faculty members and students in autonomous polytechnic colleges.

The research has also found that the effect of the leadership quality practices on performance of the main stakeholders of polytechnic education. The outcomes of the research would be highly useful for top management, principals and departmental officials of technical education for effective formulation and implementation quality leadership practices and performance evaluation mechanisms to enhance the excellence of students and faculty members of autonomous polytechnic colleges.

The model developed to understand the inter relationship between leadership and performance of autonomous polytechnic colleges would have
the universality application in any kind of technical educational institutions not only in Tamil Nadu and India and also across the borders. Meanwhile, the present research has contributed not only to the theoretical and conceptual contribution to literature of leadership practices and performance, but also it has provided the empirical evidences and generalisations.

6.4 LIMITATIONS OF THE RESEARCH

The present study is based on the primary data collected from faculty members and students of autonomous polytechnic colleges in Tamil Nadu. Hence, the drawbacks and limitations of the field level survey are very much applicable to the present research. The data and information collected from the respondents are subjected to recall bias.

6.5 SUGGESTIONS FOR FUTURE RESEARCH

The organizational performance results dimension is conceptually broad, measuring many facets of internal and external polytechnic college performance. The technical educational institutions deal with many different issues and priorities. More research on specific outcomes for different facets of polytechnic education for both internal and external customers is needed to identify specific and clear measures or indicators of performance and satisfaction such as student segments, disciplines, majors, research, administrative, campus life, job placement, alumni activities, interdepartmental links and accreditation.

Future research can improve upon our research findings by evaluating other educational units using different samples at other educational organizations, such as Government and private polytechnic educational systems. Another plausible direction for future research might test the model across different cultures (regions). This research adds to the rich body of other
endeavors to find the best casual model of organizational performance for polytechnic education. Hence there is a need for a far closer alignment of research on leadership with outcomes-linked evidence about teaching and learning.

There is a need for qualitative inquiry into the leadership behaviours that have been shown through quantitative inquiry to have a relatively strong impact on student outcomes. The purpose of the qualitative inquiry is to move from the study of behaviours to the study of practice by discovering the constraints that enable the effective practices and rule out the less effective ones. Such inquiry provides rich clues about how to intervene to improve the impact of leadership on student outcomes. It is further recommend to identifying, explaining and intervening in the degree of alignment between those who have positions and responsibilities that are intended to be influential and those who actually exercise leadership influence.

Principals in polytechnic colleges rarely engage in teaching students and their influence on student learning is secondary in that the primary providers of learning in polytechnic colleges are lecturers. The ‘bottom-line’ outcome of leadership is about the improving learning of students and this will be contingent upon developing and nurturing the capacity of faculty members and other members of the polytechnic community to improve student learning. This capacity will be enhanced by leaders who provide support for individuals and also recognize the need for individuals to work together so that they develop an understanding of collective vision and mission.

Improving the quality of leadership practices for effective learning requires strategies which focus on change at the college and classroom levels. The principals and faculty member members of polytechnic colleges can no longer simply wait for instructions or decisions from government. The pace of
change and the need to be adaptable and responsive to local circumstances requires that faculty members develop new skills and ways of working.

Improving learning and performance outcomes require an approach to leadership development, which focuses on ‘instructional leadership’. This means attempting to change the mind set of leaders to regard the processes of teaching and learning as central to their role rather than simply leaving such matters to educators.

6.6 CONCLUDING REMARKS

The majority of the faculty members in autonomous polytechnic colleges are males and the most of them belong to the age group of 41-50 years and the most of them are post graduates and belong to the engineering departments. The majority of the staff members are lecturers.

The leadership directions of senior leaders set institutional values and senior leaders create an environment for equity to all students is strongly agreed by the faculty members. The organizational governance of principal’s accountability for the actions taken by him is very good and faculty member member’s accountability for the action taken by them is very good is strongly agreed by faculty members.

The organizational performance review of individual subjects result analyses are carried out semester-- wise and individual faculty member member’s performance is carried out department-- wise is strongly agreed by the faculty members. The social responsibility and ethics of special measures are adopted for achieving regularly, safety, accreditation and legal requirements and key communities are identified for support and upliftment is strongly agreed by faculty members.
The values, faculty member member’s learning, innovation, safety, interest of faculty member, quality and educational service discriminate the lecturer, head of the department and principal in autonomous polytechnic colleges.

The majority of the students in autonomous polytechnic colleges are males and the most of them belong to the age group of 16-17 years. The most of the students prefer mechanical branch and the job opportunity is the major reason for choosing a particular branch.

The quality of education, image of the college, responsibility of institution, recommendations of faculty member members and parents, recruitments, value of institution, extra curriculum and friendship are the factors affecting the selection of autonomous polytechnic colleges by the students.

The loyalty to institution is very high, meritorious students’ admission is improving year by year and environment and safety activities are very good are strongly agreed by the students of autonomous polytechnic colleges.

The student’s satisfaction, faculty member member’s satisfaction, service to the students and environment and safety discriminate the five branches of civil, mechanical, electronics and communication, electrical and electronics and computer science in autonomous polytechnic colleges.

The leadership quality practices of organizational governance, organizational performance review and social responsibility and ethics except leadership directions are positively and directly influencing the performance results of autonomous polytechnic colleges.