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Academic Dishonesty in University of Education, Winneba: Prevalence, Penalties and Prevention

Abstract

The aim of this survey was to determine the prevalence, penalties and remedies for academic dishonesty in University of Education, Winneba. Results indicate a higher tolerance for academic misconduct by students in comparison to staff, particularly with respect to falsification of research results and plagiarism, as well as considerable underestimation by staff of the prevalence of virtually all forms of student academic misconduct. Mechanism for managing and curtailing the level of academic misconduct, are suggested.

Introduction:

Academic dishonesty is a fundamental issue for the academic integrity of higher education institutions, and one that has gained increasing media attention. Academic dishonesty has been defined in many ways. Bowers (2003) described academic dishonesty as “students engaging in dishonest behaviours not limited to activities such as plagiarizing and cheating”. According to Moeck (2002), academic dishonesty includes abuse of academic materials by destroying or altering of content, damaging equipment so that other students would not be able to use it, or any form of behaviour that ends with the student having lied about his or her work”.

William L. Kibler {2006}, defined “academic dishonesty as forms of cheating and plagiarism that involve students giving or receiving unauthorized assistance in academic exercise or receiving credit for work that is not their own”.

Forms of Cheating and Plagiarism by Students:

Students plagiarise in four main ways. These are:

- (1) Stealing materials from another source and passing it off as their own work.
- (2) Submitting a paper written by someone else. (e.g. a peer or relative) and passing it off as their own.
- (3) Copying sections of material from one or more source texts, supplying proper documentation (including the full reference) but leaving out quotation marks, thus giving the impression that the material has been paraphrased rather than directly quoted.
- (4) Paraphrasing material from one or more source texts without supplying appropriate documentation.

UEW’s Policy on Academic Dishonesty

The University Council has instituted a policy in respect to academic dishonesty and plagiarism which indicates that cheating by students in any form is not permitted and that work submitted for assessment purposes must be the independent work of the student concerned. The very notion of academic dishonesty is seen by the management of the university as being the most serious academic offence, (UEW Statute, 2007).

All forms of academic dishonesty are considered serious offences within the University and a student who commits such an offence runs the risk of a range of sanctions including a failure in the course or a requirement to withdraw from the University. Academic dishonesty includes plagiarism as well as any deliberate attempt to gain unfair advantage academically for oneself or others. Dishonest practices include fabrication of data, cheating, or the altering of false statements related to academic work by a

student. Plagiarism means presenting work done (in whole or in part) by someone else as if it were one's own (UEW Student Handbook).

Plagiarism should be distinguished from co-operation and collaboration. Usually, students are permitted or expected to work on assignments collectively or separately. This is not a problem so long as it is clearly understood whose work is being presented.

Statement of the Problem

Evidence shows that academic dishonesty is a significant issue that the university needs to address. While it appears that both staff and students are generally concerned about the prevalence of academic misconduct, they are disinclined to report known or suspected incidence. A variety of strategies are presently being used by academic staff to combat dishonest student's behaviour; however, the seemingly haphazard application of these strategies by the academic staff makes it difficult to assess the impact.

Furthermore, there appears to be a focus on assessment items as a means of managing academic dishonesty, with little attention given to other strategies such as fostering an environment of academic integrity, educating students about ethical values and beliefs, introducing honour codes or by adopting a holistic approach to integrate all the strategies.

Even though many of these strategies require institutional level action and resources to be effectively applied, it appears that the academics are doing what they can within their own means and resource constraints.

Methodology

The target population for the study was all academic staff and students of the University of Education, Winneba. A purposive sample of students and staff from three departments namely, Basic Education, Psychology and Education and Social Science were used because seemingly reports of academic misconduct had emanated from these departments. The survey method was adopted because the study was basically collecting their opinions on academic misconduct.

Instrument/Data Collection

A structured interview was used to collect data on Academic Dishonesty in University of Education, Winneba: Prevalence, Penalties and Prevention. Some pertinent questions asked were: have you engaged in any academic misconduct; which of the following will you consider as academic misconduct?; which penalties should be imposed on offenders? and which suggestions would you make to prevent or deter offenders? Information generated was placed in percentages.

Related Literature.

There is evidence of pattern of variations in the incidence of cheating by students all over the world. These include:

- (1) Variations between Disciplines: Meades (1992) asked six hundred students at thirty-one top ranked United States of America Universities if they had cheated during their University career. Cheating was most commonly reported by the students in Business Studies, ranked highest (87%), followed by Engineering (74%), Science (67%), and Humanities (63%).
- (2) **Variations between Countries:** Diekhoff and other writers (1999), found similarities and differences in attitudes and behaviours between American and Japanese University students. Lupton and other writers (2000), also found significant differences in behaviour and beliefs about cheating between U.S. and Polish Business students ; 84% of the later reported having cheated, compared with 55% of the former.

(3) **Variations between Undergraduate and Graduate Students:** Few students have also shown that despite the level of self – perception among graduate students, graduate students had a similar degree of unethical behaviour compared with the undergraduate students.

(4) **Variations through Time:** Longitudinal and time series data on student cheating are thin on the ground, but the evidence suggests that it is becoming more common, e.g. McCabe and Bowers (1994) discovered a dramatic increase in self –reported cheating among male undergraduate college students between 1963 and 1991. Between 1984 and 1994, many observers in Ghana believed that the incidence of plagiarism in Universities in Ghana is on the rise, driven by ease of access to digital sources of information, particularly the internet. (Addison P.A. -2001).

The trend of an increase in academic dishonesty might be associated with a changing environment for tertiary education; where Universities have become larger, less personal and more competitive, leading to increasing student cynicism toward academic dishonesty. The university is now regarded by students as credentialing institution rather than as educational institution. There is a down trend toward students honesty.

Although over a decade ago, the incidence of academic cheating was more prevalent among males than females, records indicate that female cheating is increasing, possibly due to a convergence of role requirements among males and females in the academic environment. Findings have also shown that within the tradition age span of 17 – 25 years, students tend to cheat more than “non-traditional” age students.

Why do Students Cheat?

The situation is often more complex and multi-dimensional with no simple cause-effect link.

There are simple reasons why students cheat. These include:-

- (1) **Genuine lack of Understanding:-** Generally students plagiarise unintentionally, especially when they are not familiar with proper ways of quoting, paraphrasing, citing and referencing. Students plagiarise when they are unclear about the meaning of common “knowledge” and the expression “in their own words”.
- (2) **Efficiency gain:-** Students cheat to get a better grade and to save time. Some students cheat because of what ‘Straw’ calls the “GPA thing” so that cheating becomes the price of grade ‘A’. Students should be awarded grades based on their efforts rather than on achievement.
- (3) **Time Management:-** There are many calls on student’s time, including peer pressure for an active social life, commitment to college sports and performance activities, family responsibilities and pressure to complete multiple work assignments in short amount of time. Students’ overtaxed lives leave them so vulnerable to the temptations of cheating.
- (4) **Personal values and attitudes:-** Some students see no reason why they should not cheat or do so because of social pressure, because it makes them feel good and regard short cut as clever and acceptable way of making it in life.
- (5) **Defiance:-** To some students plagiarism is a tangible way of showing dissent and expressing a lack of respect for authority.
- (6) **Students’ attitude towards lecturers and class:-** Students cheat because they have negative attitudes towards assignments and tasks. The level of relationship between students and lecturers plays a major role in why students cheat. Students who cheat believe that there is lack of fraternity between them and their lecturers.
- (7) **Denial or Neutralization:-** Some students deny to themselves that they are cheating or find ways of legitimizing it by passing the blame on to others.
- (8) **Temptation and Opportunity:-** It is both easier and more tempting for students to plagiarise as information becomes more accessible on the internet and web search tools make it easier and quicker to find and copy.

- (9) **Lack of Deterrence:-** To some students the benefits of plagiarizing outweigh the risks, particularly if they think there is little or no chance of getting caught and there is a little or no punishment if they are caught (Devis and Ludvigson, 1995).

Determinants of Cheating Among Students:

Students who engage in cheating behaviour share common characteristics. Evidence suggests that some factors might be particularly helpful in predicting or explaining cheating behaviour by students. These factors include:-

- (1) **Gender:-** Cheating tends to be more common among male than among female students. (Calabrese and Cochran, 1990; Buckley et al; 1998 and Straw, 2002.)
- (2) **Age and Maturity:-** Young students tend to cheat more often than the older and more matured students. (Straw 2002, and Haeines et al, 1986)
- (3) **Academic Ability:-** Studies have shown that cheating is more common among students with lower grade point averages than among those with higher grades. (Leming, 1980).
- (4) **Students social life:** - Cheating is more common among students who party a lot and have very active social lives. Students who involve themselves in several outside activities, campus fraternities and sororities tend to cheat more than students who do not involve themselves in such activities (McCabe and Bowers 1996 and Straw, 2002).
- (5) **Peer Disapproval :-** Peer disapproval is often only a minor influence on cheating by students, although it may be stronger in institutions with honor codes. (Trevino, 1997).
- (6) **Student personality factors:-** Students tend to cheat more often if they lack confidence, feel under pressure and often seek approval of parents and peers.
- (7) **Students Attitude towards their classes:-** Cheating tends to be more common in classes where the subject matter seems to students unimportant or uninteresting or where the teachers seemed disinterested or permissive. (Gerdeman, 2000).

Penalties and preventions of Academic Dishonesty:

One of the more traditional approaches toward managing academic dishonesty is by deterrence. This may take the form of a misconduct policy that sets out the consequences of being caught or engaging in such behaviour. According to Zobel and Hamilton,(2002,) “the rigorously imposing and publicizing potential penalties to students will assist in reducing the incidence of academic dishonesty”.

Academic dishonesty is influenced by the likelihood of being reported and the severity of penalties mete to students. Students use rational choice to weigh up the advantage of engaging in academic dishonesty against the risk of being caught and the penalties imposed. If heavy penalties are not imposed on students it will encourage misconduct.

Another approach towards reducing academic dishonesty involves minimizing opportunities for students to engage in such act. Since most forms of student academic dishonesty relate to assessment practices such as examination cheating, assignment copying or plagiarism, careful assessment design can be used to reduce dishonest behaviour. It is also important for the management to devote sufficient resource such as staff time as well as financial resources for the purchase of specialized soft ware’s to combat the problem.

By fostering an environment of academic integrity, students would be able to understand academic integrity, its meaning and how it can be achieved. Academic integrity is a significant tool to influence UEW’s ability to develop an understanding and acceptance of academic integrity policies.

The Survey:

Table 1 below shows the number of respondents in the survey. There were a total of 437 respondents, made up of 22 academic staff and 415 students from all four levels of the undergraduate programme.

S/N	Department	Staff	Percentage (%)	Students	Percentage (%)	Total	Percentage (%)
1	Basic	7	32	135	32	142	32
2	Social Science	6	27	120	29	126	29
3	Psychology & Education	9	41	160	39	169	39
	Total	22	100	415	100	437	100

A survey conducted in UEW Academic Departments have shown that academic dishonesty especially various forms of “cut and paste”, plagiarism, stolen off the web, are widespread. The problem appeared to be on the rise in Departments where students’ population are very large, e.g. Basic Education, Psychology and Education, Social Science Education.

According to the survey, the percentage of students who reported ever using a ‘cheat material’ doubled from 30 to 60 per cent. Surprisingly, nearly 70 per cent of students of UEW surveyed agreed that it was wrong to “hand in someone else’s writing as one’s own”, and to purchase examination papers from staff. Three out of four students have engaged in academic misconduct before reaching level 400. These misconduct include copying from another student during an examination, using unauthorized materials during an examination, or collaborating on assignments requiring individual work.

Views of students and staff on non-reporting of academic misconduct

All the 415 students in the survey said that it was not their business to report academic misconduct of other students and that it was the duty of the University to police cheating in the University. Thirty per cent of the student-respondents from the Department of Basic Education were of the view of being loyal to their peer groups and as such felt reluctant to report colleagues. Both students and staff interviewed were afraid of making enemies or being ostracised by colleagues.

Seventy-five per cent of the respondents also taught that reporting a colleague was worse than cheating. About ninety-six (96%) percent of the respondents do not believe that Management would take any stringent measures against the offenders.

Managing Academic Dishonesty: Views from Academics Staff

It was also noted that academic staff in all departments under the survey devoted some portion of their lecture period to hold discussions on the consequences of academic dishonesty. They often insisted students sign a declaration (particularly when it is a group work) that those group members have actually undertaken the assignment. Subsequently, where cheating or plagiarism is discovered they do not hesitate to impose penalties on such culprits.

Academic staff from the three departments also mentioned the following as ways they employ to manage academic dishonesty:

- 1) By teaching students a course in paraphrasing and referencing skills.
- 2) By supervising test or examination more closely.
- 3) Through building up close relationship with the students.
- 4) By closely monitoring group assessment to ensure that marks are allocated based on individual merit.
- 5) By reducing or eliminating the number of take-home assessments but rather relying more on the supervised tests or examinations for assessment of students.
- 6) By changing grading or marking practices, e.g. by collecting notes and rough drafts along with assignments.
- 7) By retaining all student assessment works.

Some strategies taken by the staff of the Social Science Education Department were basically to frame assessments in different ways for example using more essay questions or requiring students to submit a portfolio of their work rather than a single piece of work. As well as organizing proper seating arrangements or otherwise changing the physical environment during examinations.

The Basic Education staff suggested grouping the classes into smaller groups to allow better relationships with students and greater opportunities for observation.

Divergent views from Staff and Students on Penalties for Academic Dishonesty

A growing pool of evidence from semester by semester examination in UEW suggest that dishonest behaviour by students is highly prevalent(60%), and that there are divergent views between academic staff and students in terms of the acceptability of such behaviour and the penalties it should attract. This seemed to pose moral and financial concerns for UEW in relation to performance in teaching and learning by the students and academic staff.

In Table 2 indicate that both students and staff are reluctant to report suspicious academic misconduct to management. While students commonly express a belief that other students' actions are not their business, academics feel the lengthy reporting processes and a perception that management would not support them are key factors in their unwillingness to report students. These limit the ability of the university to both determine the extent of academic dishonesty and inability to develop long term strategies to combat the situation.

Even though academics appear to recognize the importance of this issue, with many departments indicating that they have improved the delivery of their course, in relation to assessment items, by reducing the opportunities for students to engage in academic misconduct, academic indicators such as coordinated approach, assessment items, and financial resources are perceived to be unfavourable.

Table 2 : Student-Staff Divergent Views on Recommended Penalties for Academic Dishonesty:

S/N	Scenario	Most Commonly Recommended Penalty by Students	Most Commonly Recommended Penalty by Staff
1	Impersonation in an examination.	Fail grade for the course	Expulsion/Refused re-enrolment.
2	Gaining unauthorized access to test or examination materials.	Fail grade for assessment or examination.	Fail grade for course work.
3	Padding bibliography with references not used.	Warning.	Reduction in marks for the project work or assessment.
4	Paying another student to complete an assignment or class work.	Fail grade for the assessment.	Fail grade for course work.
5	Writing an assignment for someone else.	Fail grade for the assignment.	Fail grade for the course work.
6	Copying information without referencing the source.	Reduction in marks for assignment.	Fail grade for the assignment.
7	Falsification of research results.	Reduction in marks for the assignment.	Expulsion or refused re-enrolment.
8	Collaborating on individual work.	No penalty.	Reduction in marks for the assignment.

Conclusion

It is evident from the survey that academic dishonesty is prevalent among students. However, students and staff have divergent views on how to curb this canker.

Recommendations:

Based on the conclusion above the following recommendations are put forward:

- The University must conduct open discussions with staff and students for the purpose of determining new policy to safeguard the academic integrity of our university. It is therefore advocated that integrated approach should be applied at the departmental level.
- The introduction of courses in ethics into University curricula by the Department of Psychology and Education would provide means of increasing students' ethical sensitivity and behaviour.
- Introduction of academic honour codes. It would provide an alternative approach toward reducing the incidence of academic dishonesty by involving students to pledge and abide by an honour code that clarifies expectations regarding appropriate and inappropriate behaviour, and to take responsibility for detection and sanctioning of violations when they occur.
- Encouraging students and staff to report suspicious academic dishonesty. The report by academic staff and students of academic misconduct is not only important in terms of both determining the gravity of the problem and ensuring that perpetrators are brought to account for their behaviour, but is also a vital first step towards eroding the culture of acceptance.
- The most appropriate method of dealing with academic dishonesty is by the integrated approach. Thus, through focusing on reducing opportunities for students to engage in such behaviour by carefully designed assessment items and close supervision of examinations through stricter enforcement of appropriate penalties for students who choose to engage in dishonest behaviour and students involvement in establishing, implementing and strengthening of student codes of conduct. The success of such a strategy would depend on its being conducted in a coordinated and logical fashion at both the Departmental and institutional levels, rather than being left up to individuals to apply.

References

- Addison P. A. – (2001). “Academic misconduct, definitions, legal issues and management”.
- Anderson Re & Obenshain 5.5 – (1994). Cheating by students; findings, reflections and remedies, *Academic medicine* 69, Pp 123 – 126.
- Bailey P. A. – (2001) “Academic Misconduct: Responses from Deans and Nurses Educators”, *Journal of Nursing Education*, 40 (è) Pg. 124 – 131
- Baird J. S. – (1980), Current trends in college cheating. *Psychology in school*, Pg. 17, 515-522
- Beadle D. J. – (1994), cheating among students., New York McGraw Hills Books company
- Blimling G. S – (1995). Curbing epidemics cheating through systemic change, *college Teaching*, 43 (4) Pp. 123 – 126
- Bolin A. – (2004) “Self-control, perceived opportunity and Attitudes as predictors of Academic Dishonesty” *The journal of Psychology*, 138 (2), 50 Pg. 397 – 414
- Bower W. J. – (1964) students dishonesty and its control in college New York, N.Y. Columbia University press
- Brimble, M.A. – (2005) Perceptions and prevalence of Academic Misconduct in Australian University”, *Australian Educational Researcher*, Forthcoming.
- Brown, B. S – (1995). The academic ethics of graduate business students: A survey. *Journal of Educational for Business*, Pg. 70-73 and 151 – 157.
- Brown B. S. Emmett, D. – (2001). Explaining variations in the level of academic dishonesty in studies of college students: Some new evidence i.e. *College students journal*, Pg. 35 – 39 and 529 – 539
- Bruno R. and Bernard R. – (2004). Examining the decision process of students cheating behaviour: an empirical study, *journal of Business Ethics*, vol. 50, pp. 397 – 414
- Caney J. – (2003). Mirror of the times. *The Nation*; Retrieved July10, 2008 from <http://www.thenation.com>.
- Clayton M. – (1999). A whole lot of cheating going on *Christian Science Monitor*, Pg 36 & 91
- Davis, S.F. & Wayne Ludvigston – (1995). Additional data on academic dishonesty and a proposal for remediation. *Teaching of Psychology*, Pg 22 – 28 and 199 – 121.
- Davis, S. F and C. A Becker – (1992). Academic dishonesty: Prevalence, determinant, techniques and punishments.
- Dayman, J and Kisfman J. – (2002). “Understanding and Reducing Academic Misconduct at the University of Guelph.
- Dean,R. Gerdeman – (2000) Academic dishonesty and the Community College.
- Drake, C. A – (1994): Why students cheat. *The journal of Higher Education*, Pg. 418 – 420.

- Eric Hoover – (2002). *The Chronicles of Higher Education*.
- Ferrell, C. M – (1992), *Assessing Teacher, Education Students' propensity toward academic misconduct*.
- Franklin Stokes – (1995). *Undergraduate Cheating: Who does what and why?* *Studies in Higher Education*, 20 (2), 159 – 173.
- Graham, M. A. – *Cheating at small colleges: An examination of students and faculty attitudes and behaviours*. *Journal of College Student Development*, 35 (4), 255 – 260.
- Grimes, P – (2004). *Dishonesty in Academic and Business; A Cross-cultural Evaluation of student Attitudes*” *Journal of Business Ethics*, 49, Pg. 273 – 290.
- Guiliano E. – (2000) *Deterring Plagiarism in the age of the internet* pg. 21 – 31, *Inquiry*
- Herbelmy M. – (2002). *Maintaining Academic integrity in online Education*.
- Hill R.S. – (2004). *Developing a New Faculty Approach to Quality Policy on Plagiarism*”, *Proceedings of the Australian Universities Quality Forum*.
- Jean Piaget – (1997). *The Moral Judgment of the child*
- Johnston K. D. – (1991) *Cheating: “Reflections on Moral Dilemma”* *journal of moral Education* 20, no. 3 (1991) 283 – 291
- July P – (1998) *The Ethics of Plagiarism*. Report No 1998 – 04 00.
- Larkham P. J. – *“Plagiarism and its Treatment in higher Education”* *Journals of further and higher Education* 26 (4), Pg. 339 – 349
- Love Pg. 8 Simmons J. – (1998) *Factors influencing cheating and plagiarism among graduate students in a college of Education*. *College Student Journal*, 32 (4), 539 – 551
- Mohon, R. L. (2002) – *Got Plagiarism? Try the Guillotine* *Commonly College week*, 15 (9), 4 – 6.
- McCabe, D. L. & Trevino L.K – (1996) *What we know about cheating in college*. *Change*, 25 (1), 28 – 34.
- Moeck P. G. – (2002) *Academic dishonesty: Cheating among Community College Students*. *Community College Journal of Research and Practice*, 26, 479 – 491.
- Morales T. – (2003). *School Cheating as social corrosion*. *Christian Science Monitor*, 92 (1991)
- Nelson B. – (2002). *“Higher Education at Crossroads” An Overview Paper*”, Department of Education, Science and Training.
- Niels F. – (2001) *Academic Practices, School Culture and Cheating behaviour*.
- Noniss and Swift C. – (2001). *“An Examination of the relationship between Academic Dishonesty and Work Dishonesty: A multi campus investigation”*, *journal of Education of Business*, 77 (2), Pg 66 – 77.
- Ostling, R. N. – (2003). *Is there a U.S.A. epidemics of lying? Athens Banner – Herald*.
- Renard L. – (2000) *Cut and Past 104: “Plagiarism and the Net”* Pg. 38 – 42.
- Rennie S. C. and Crosby J. R. – (2002) *“Students' perceptions of whistle the Blowing: Implications for self-Regulation. A Questionnaire and Focus Group Survey; Medical Education*, 36, Pg. 173 – 179
- Roberts D and Toombs R. – (1993). *A scale of Assess perceptions of cheating in examination – related situations”* *Educational and Psychological Measurement* 53 , Pg 755 – 762.
- Robert Harris – (2001). *The Plagiarism Handbook. Strategies for presenting, Detecting and Dealing with Plagiarism*.
- Roig M.- (1997), *Can undergraduate students determine whether text has been plagiarized?* *Psychological Record*, 47 (1) 113- 123.
- Schneider A – (1999) *“Why professors Don't Do more to stop students who cheat”*, A8 –A10.
- Shrophine, W. O. – (1997). *Of being and getting Academic honesty*. *Liberal Education*, (83) 4, 24 – 32.
- Sims R. L. – (1993). *The relationship between academic dishonesty and unethical business practices*. *Journal of Education for Business*, (68) 4 207 – 21.
- Sims R. L. – (1995). *The severity of academic dishonesty: A comparison of faculty and student views*. *Psychology in the schools*, (32) è, 233 – 239.
- Spiller S. & Crown D. F. – (1995) *Changes over time in academic dishonesty at the collegiate level*. *Psychological Reports*, 76 (è), 763 – 769
- Sausen J. – (1990). *“The Ethics of Teaching Business: Toward a model for Business professors”*, *SAM Advanced Management Journal*, 9 Pg. 33 – 37
- Stern E., - (1986) *“Academic Misconduct: Results of Faculty and Undergraduate student surveys*, *journal of Applied Health*, 5, Pg. 129 – 142.
- Storch J. and Storch E. – (2002). *Academic Dishonesty and Neutralization. Theory: A comparison of intercollegiate Athletes and Non-Athletes”*, *journal of college student Development*, 43 (6) Pg. 921 – 930
- Sykes G. and Motza D – (1957). *Techniques of Neutralisation: A Theory of Delinquency; American Sociological Review*, 22 Pg 664 – 670.
- Walsh M. – (2002). *Cheating and Plagiarism: Perceptions and practices of first Year IT students”*, Working Paper, Monash University.
- West T. and Ravenscroft S. – (2004). *Cheating and Moral judgment in the College Classroom: A Natural Experiment; journal of Business Ethics*, 54 (2) Pg 173 – 183.
- Woessner M. C. – (2004). *Beating the House: How inadequate penalties for cheating make plagiarism an Excellent Gamble*, *Political Science and Politics*, April Pg 313 – 320.
- Zobel and Hamilton M. – (2002). *Managing student plagiarism in large Academic Departments; Australian Universities Review*, 45 (2) Pg 23 – 30.