

A STUDY MEASURING THE ROLE OF INTELLIGENT FAILURE AMONG UNIVERSITY STUDENTS

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Abstract:

Failure offers a special chance to learn. People are typically more inclined to learn from their mistakes when they face obstacles, make blunders, and face setbacks. This can result in a more thorough comprehension of difficult topics, enhanced problem-solving abilities, and a better understanding of the subject matter. Success in today's ever-evolving world depends on developing creative problem-solving skills and adaptability. This study attempts to measure the role of intelligence failure among university students. The technique used in this study is the Wilcoxon one-sample signed rank test. The study's findings indicated that Leadership skills, Decision-making, Entrepreneurship, Creative thinking, EQ, Cognitive skills, learning skills, Critical thinking, Communication skills, Networking, Motivation and Personal growth greatly impact the role of intelligent failure among university students.

Keywords: *Wilcoxon one-sample signed rank test, Intelligent Failure,*

Introduction:

It is crucial to consider the phenomenon of intelligent failure among university students. According to earlier research, there is a correlation between cognitive load and cognitive failure, with internal germane and external burden serving as important predictors of cognitive failure (Ali et al. 2016). Furthermore, it has been discovered that the causal attribution of academic success and failure predicts academic progress, with personal control being a crucial component (Asina et al., 2020). Universities are essential to society because they produce future leaders from various backgrounds. Their main duty is to educate the public to the point where they are ready for leadership. These establishments also work together with development agencies to promote world economic expansion. Nonetheless, a notable obstacle is the elevated rates of student abandonment. Numerous causes, such as low commitment, lack of desire, personal traits, external pressures, and academic challenges, might be blamed for these dropouts. It is difficult to forecast success at the university-based just on pre-enrolment factors, such as prior academic performance in school, due to the intricacy of the issue. Alternatively, concentrating on post-enrollment problems that have a major impact on academic progress could be a more successful strategy. Numerous aspects

that instructors and students believe impact students' failures have been uncovered via research. Comprehending these variables can prove beneficial in several factors. First, it can assist students in taking charge of their education and changing how they approach their university coursework to succeed more. Secondly, it can provide instructors valuable perspectives on supporting students' learning and establishing a more constructive learning atmosphere. Finally, university officials may use this information to boost student achievement by improving the learning environment. Academic failure has been linked to poor topic selection, little family support, and low involvement in class Yousaf et al. (2013). To help universities overcome their obstacles in assuring student success, an intelligent "student-success-centred" system can be implemented (Fatema 2021).

Sim Sitkin, a management professor at Duke University, first used the term "intelligent failure" in 1992. Intelligent failures, in Sitkin's view, have five features: (i) they arise from carefully considered actions that (2) have uncertain outcomes and (3) are of modest scale; (ii) they are carried out and responded to promptly; and (iii) they occur in domains that are sufficiently familiar to allow for effective learning. The degree to which the person or organization gained knowledge from failure is a crucial distinction between clever failure and terrible failure. Not all failures are equal; those that yield important insights are, by definition, more beneficial than those that do not. Therefore, supervisors shouldn't ignore errors and provide credit or rewards to those who are inept, careless, imprecise, or incompetent. Intelligent failure is not like T-ball when every kid receives a trophy. It's not always easy to accept defeat and grow from it. According to Dahlin et al. (2018) and Pfeffer & Sutton (1999), failure is frowned upon and treated with fear and avoidance. Individuals indeed use a variety of biases and heuristics, as well as a great deal of time and effort, to avoid acknowledging failure (Tversky & Kahneman, 1974). Few people like to take a position before a group of people, no matter how little, and own up to their mistakes. One aspect of the issue is that people view failure as a waste of money, time, or other resources. Another factor is people's fear of being called unjust or inept thereby endangering their jobs. (The Routledge Companion to Management and Workplace Spirituality. (2019).

This study is important because it clarifies the profound effects of intelligence failure on college students. It also shows that learning from mistakes positively impacts many important skills and traits, including creativity, leadership, emotional intelligence, and decision-making. These findings highlight the importance of growth mindsets and resilience in academic and personal development. They also provide educators and institutions with useful information

on how to create an environment where students feel comfortable failing smartly, ultimately positioning them for success in a changing world.

Review of Literature:

- 1. Ali, et al. (2022).** The authors conducted this research to determine the relative influence of cognitive load and its dimensions in predicting cognitive failure among university students. The author aimed to investigate if there is a significant difference in cognitive load and cognitive loss based on two variables: gender and specialization. The study's findings indicated a positive significant correlation between cognitive loss and cognitive load dimensions. Internal and germane cognitive load predicted cognitive failure; external cognitive load did not predict failure. It was further seen that combining the internal and external cognitive load improved predictive accuracy. Lastly, it was found that gender or specialization has no notable difference in cognitive load or cognitive failure.
- 2. Asina, et al. (2020).** The study aimed to determine if students' perceptions of the reasons for their academic success or failure might be used to forecast their academic achievement. The study discovered that these concepts had a big impact on academic success. Additionally, it showed that high achievers and low achievers had different ideologies. More specifically, a key predictor of students' academic achievement was their belief in their capacity to alter these variables.
- 3. Yousaf, et al. (2013).** The purpose of the study was to investigate the factors contributing to academic failure in university education, focusing on post-enrolment influences perceived by students at the University of Gujarat. The findings indicated that gender differences were observed in how male and female students perceived the causes of academic failure. It was seen that there are no significant differences in the perception of academic failure causes among students in different faculties, i.e., B.Sc., MA and M.Sc.). The study's model demonstrated how students' decisions to drop out of college were strongly influenced by their involvement in class and the level of parental support. In addition, students' decisions to drop out were indirectly impacted by changes in the educational system and inappropriate topic choices, which were connected to engagement in class.

4. **Fatema, et al. (2021).** The research took organizational, social, technological, and cultural aspects into account to solve the challenges of guaranteeing student success in higher education. It looked at how technology, especially artificial intelligence (AI), affects university operations. It also highlighted the advantages of efficiency and performance while pointing out problems with information quality and top management engagement. The results of this study highlight how complex it is to guarantee students' success in higher education and that organisational, social, technological, and cultural aspects must all be taken into account. AI, in particular has been shown to have beneficial and detrimental effects on important university operations, including recruiting, admittance, enrolment, and retention of students. The benefits of implementing AI included improved overall performance and operational efficiency, but there were also notable hurdles, mostly related to information quality and the level of senior management engagement. Furthermore, the report stressed the importance of a strong governance structure even as technological advancements support e-campus projects. Finally, the study presented a conceptual framework for implementing an intelligent "student-success-centered" system and covered the benefits and difficulties of doing so.
5. **Jasvir, et al. (2020).** This study looked at how difficult supervision issues affected international postgraduate students' experiences at a research institution in Malaysia. The study discovered that supervision problems and faculty mismanagement were the two leading causes of academic failure for foreign postgraduate students at the Malaysian research institution. Students' excitement, drive, and psychological well-being were negatively impacted by these educational failure experiences, which impeded their ability to advance in their research projects. In this regard, the study emphasizes how critical it is to create efficient plans of action to assist foreign postgraduate students and improve their academic performance.
6. **María, et al. (2021).** This study's primary objective was to address the problem of university dropout rates, a critical metric in the accreditation process. The study found that several factors, including attention, IQ, motivation, metacognition, and emotional components, were substantially correlated with academic achievement. Students with moderate to high cognitive skills but inadequate learning strategies, students with medium to high cognitive and learning capabilities, and students with low cognitive

functions and medium learning capacity were found to be three separate groups using conglomerate analysis. Notably, 83.3% of students in danger of dropping out were in groups 1 and 3, which included members with worse academic performance. According to the study's findings, students in two categories were most in danger of failing their classes: those with low cognitive ability and those with poor learning abilities. This information can inform interventions to help these high-risk student groups and lower dropout rates.

7. **M Pascale et al. (2021).** This theoretical paper aimed to do two things: first, it will investigate why teachers frequently do not learn from their mistakes; second, it seeks to provide a conceptual framework that views intelligent failure as an organizational learning process that may be used for school reform. According to the paper, schools must accept intelligent failure as an organizational learning process. It offers a conceptual framework that combines leadership tolerant of intelligent failure with learning settings to locate the underlying causes of failure and derive insightful lessons from failure analysis. This method fills a vacuum in the literature on education by redefining intelligent failure as an organizational asset for school progress. It also provides a fresh viewpoint on organizational learning and school administration.

Objectives of the Study:

1. To evaluate the role of intelligent failure among university students.
2. To give appropriate suggestions to promote intelligent failure among the students.

Hypothesis:

H₀: The role of intelligent failure among university students is insignificant (Median = 3)

H₁: The role of intelligent failure among university students is significant (Median ≠ 3)

Research Methodology:

A descriptive research design is used for the current study. The sample size selected for the survey is 115 university students. The sampling technique used for the present study is non-probability purposive sampling. Both primary and secondary data collection sources have been used. One-sample Wilcoxon signed ranked test has been used using SPSS software.

Variables	Category	Frequency	Percentage
Gender	Male	67	58.26

	Female	48	41.74
Age	Under 18	23	20.00
	18-20	37	32.17
	21-24	29	25.21
	25-29	26	26.62
Academic Year	HSC	23	20.00
	First Year	17	14.78
	Second Year	20	17.39
	Third Year	23	20.00
	Postgraduate	32	27.83

The data was collected from 115 students, of which 67 were males with 58.26 percent, and 48 were females with 41.74 percent. In the age criteria, 23 students with 20.00 percent in the Under 18 category, 29 students with 25.21 percent in the 21 to 24 years and 26 students with 26.62 under 25-29 years. The academic year of the students was seen to be 23 students with 20.00 percent in HSC, 17 students with 14.78 in the first year, 20 with 17.39 percent in the second year, 23 students with 20.00 percent in the third year and 32 with 27.83 percent were postgraduates.

Data Analysis and Interpretation:

Role of Intelligent Null hypothesis

Failure among

University Students

**Observed
Median
P – value
Results**

Leadership skills	The median of leadership skills equals 3	5	0.000	Rejected (High impact)
Decision making	The median decision-making equals 3	4	0.000	Rejected (High impact)
Entrepreneurship	The median of Entrepreneurship equals 3	4	0.000	Rejected (High impact)

Creative thinking	The median of Creative thinking equals 3	4	0.000	Rejected (High impact)
EQ	The median of EQ equals 3	4	0.000	Rejected (High impact)
Cognitive skills	The median of Cognitive skills equals 3	4	0.000	Rejected (High impact)
Learning skills	The median of Learning skills equals 3	4	0.000	Rejected (High impact)
Critical thinking	The median of Critical thinking equals 3	5	0.000	Rejected (High impact)
Communication skills	The median of Communication skills equals 3	5	0.000	Rejected (High impact)
Networking	The median of Networking equals 3	4	0.000	Rejected (High impact)
Motivation	The median of Motivation equals 3	4	0.000	Rejected (High impact)
Personal growth	The median of Personal growth equals 3	4	0.061	Rejected (high impact)

Non - parametric one-sample Wilcoxon signed ranked test is applied to evaluate the Role of Intelligent Failure among university Students. It is seen that p-value < 0.05, Leadership skills, Decision-making, Entrepreneurship, Creative thinking, EQ, Cognitive skills, Learning skills, Critical thinking, Communication skills, Networking, Motivation and Personal growth have a high impact on the role of intelligent failure among university students.

Findings:

Intelligent failure among university students has been observed to have a significant impact on a variety of skills and abilities, including leadership (being an effective leader), decision-making (making wise choices), entrepreneurship (starting your own business), creative thinking (generating new ideas), emotional intelligence (understanding your own and others' emotions), cognitive skills (how well you think and learn), learning skills (how quickly you pick up new information), critical thinking (thinking carefully about problems), communication skills (talking and writing well), networking (making important connections), motivation (staying inspired), and personal growth (becoming a better person). Students tend to do better in these areas if they don't feel scared to make errors and learn from them.

Conclusion:

In summary, this study demonstrates that students can develop a wide range of skills, including leadership, decision-making, creativity, emotional intelligence, and better thinking and learning, when they are willing to make mistakes and learn from them—a concept known as intelligent failure. In other words, it can be said that intelligent failure is beneficial since it may help students improve in various ways.

Recommendation:

- **Promote Learning from Mistakes:** Academic institutions ought to establish a setting where students are at ease enough to make errors and grow from them. They will develop and become more proficient in various areas as a result.
- **Instil Resilience:** Teaching pupils how to overcome obstacles is critical. They will better handle difficulties and have less fear of trying new things.
- **Encourage Students to Think Critically and Creatively:** Motivate students to think critically and creatively. This will enable them to generate fresh concepts and solve issues efficiently.
- **Encourage Students' Networking and Communication Skills:** Give them chances to connect and hone their communication abilities. These are useful abilities for their personal and professional development in the future.

- **Encourage and Inspire:** Continue encouraging and motivating pupils by demonstrating the advantages of learning from their errors. They can maintain their resolve and attention by doing this.

References:

1. Ali, Mahmud, Shoeib., Hind, raslan. (2022). The relative contribution of cognitive load and its dimensions in predicting cognitive failure among university students. *The International Journal of Research in Educational Sciences*, 5(4):125-193. doi: 10.29009/ijres.5.4.4
2. Asina, Christina, Rosito. (2020). Academic achievement among university students: The role of causal attribution of academic success and failure. *Humanitas*, 17(1):23-33. doi: 10.26555/HUMANITAS.V17I1.11719
3. Yousaf, Ali, Khan., Zahoor, Ahamad., Sadia, Kousar. (2013). Factors influencing the academic failure of university students. *International Journal of Educational Administration and Policy Studies*, 5(5):79-84. doi: 10.5897/IJEAPS11.043
4. Fatema, Abdulrasool. (2021). The Virtues and Challenges of Implementing Intelligent ‘Student-Success-Centered’ System. 315-334. doi: 10.1007/978-3-030-52067-0_14
5. Jasvir, Kaur, Nachatar, Singh. (2020). Academic Failure: Unspoken Experiences by International Postgraduate Students in a Malaysian University.. 8(4):79-94. doi: 10.26181/60739869892DA
6. María, Gómez, Gallego., Alfonso, Palazón, Pérez, de, los, Cobos., Juan, Cándido, Gómez, Gallego. (2021). Identifying Students at Risk to Academic Dropout in Higher Education. *Education Sciences*, 11(8):427-. doi: 10.3390/EDUCSCI11080427
7. M., A., K., Sriyalatha. (2016). Factors Contributing to Students’ Academic Performance: A Case of University of Sri Jayewardenepura, Sri Lanka. 6(1)
8. Pascale, Benoliel., Izhak, Berkovich. (2021). Learning from intelligent failure: an organizational resource for school improvement. *Journal of Educational Administration*, 59(4):402-421. doi: 10.1108/JEA-07-2020-0155
9. Raquel, Gilar-Corbi., Teresa, Pozo-Rico., Juan, Luis, Castejón., Tarquino, Sánchez., Iván, Sandoval-Palis., Jack, Vidal. (2020). Academic Achievement and Failure in University Studies: Motivational and Emotional Factors. *Sustainability*, 12(23):9798-. doi: 10.3390/SU12239798

10. The Routledge Companion to Management and Workplace Spirituality. (2019). United Kingdom: Taylor & Francis.
11. Myers, J. L., Well, A. D., Lorch Jr, R. F. (2013). Research Design and Statistical Analysis: Third Edition. United Kingdom: Taylor & Francis.
12. Ross, A., Willson, V. L. (2018). Basic and Advanced Statistical Tests: Writing Results Sections and Creating Tables and Figures. Germany: SensePublishers.
13. Statistical Analysis Handbook. (n.d.). (n.p.): The Winchelsea Press.
14. Taylor, J. K., Cihon, C. (2004). Statistical Techniques for Data Analysis. United States: CRC Press.
15. Wang, J., Wang, X. (2019). Structural Equation Modeling: Applications Using Mplus. United Kingdom: Wiley.
16. Weaver, K. F., Morales, V. C., Dunn, S. L., Godde, K., Weaver, P. F. (2017). An Introduction to Statistical Analysis in Research: With Applications in the Biological and Life Sciences. Germany: Wiley.