

A Study of Organisational Leaders' Expectations of Cognitive Skills among Management Students: Critical Thinking, Problem-Solving, and Learning Agility

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ABSTRACT

Management education increasingly operates within a professional environment that expects graduates to demonstrate more than subject knowledge alone. This study examines the cognitive skills that organisational leaders expect from management students, focusing on critical thinking, problem-solving, and learning agility. A quantitative descriptive survey design was adopted, and data were gathered from 30 organisational leaders through a structured questionnaire containing 15 Likert scale statements distributed equally across the three constructs. The analysis employed descriptive statistics and one sample t tests to determine whether the observed mean scores differed significantly from the neutral midpoint of the scale. The findings showed that all three dimensions were rated positively and significantly above neutrality, with critical thinking recording the strongest support, followed by problem-solving and learning agility. These results indicate that organisational leaders expect management students to possess higher-order cognitive capabilities that can support academic development and future workplace effectiveness. The study offers practical value for management education by highlighting the cognitive competencies that may require stronger curricular emphasis.

Keywords: Cognitive skills, Critical thinking, Problem-solving, Learning agility

1.1 INTRODUCTION

Organisations today work in conditions that are rarely stable. Change is frequent, uncertainty is common, and many professional situations demand quick but thoughtful responses. Because of this, employers are no longer interested only in what graduates know in a subject sense. They also want to see whether graduates can think clearly, understand information properly, respond to unfamiliar situations, and make sound judgements. This is especially important for management students, as their future roles are likely to involve analysing situations, dealing with problems, evaluating options, and adapting to complex organisational settings.

In this context, cognitive skills have become an important part of how management readiness is understood. Critical thinking helps students examine information carefully and question assumptions instead of accepting them too easily. Problem-solving relates to identifying issues and working towards practical solutions. Learning agility adds another important dimension, as it relates to adaptability,

openness to new demands, and the ability to learn from experience. Together, these skills form a broad but connected set of abilities that shape how management students may be judged by those in organisational roles.

Although these capabilities are widely considered valuable, their importance is best understood not only in theory but also through the views of organisational leaders. Their expectations matter because they reflect the realities of the workplace and can offer useful direction for academic institutions. When these expectations are studied systematically, educators are in a stronger position to identify which abilities need greater attention in management training. This also helps bridge the gap between classroom learning and professional practice, particularly at a time when graduates are expected to combine academic understanding with practical effectiveness in changing work environments.

The present study is situated within this concern. It examines the cognitive skills that organisational leaders expect from management students, with particular focus on critical thinking, problem-solving, and learning agility. By looking closely at these three dimensions through quantitative evidence, the study seeks to show the pattern of expectations held by organisational leaders and to provide a clearer academic basis for reflection on management education. In this way, it offers a focused account of the cognitive qualities that appear to matter most for management students in contemporary organisational life.

1.2 REVIEW OF LITERATURE

(Pérez Zúñiga et al., 2025) carried out a systematic review to examine how employability in higher education is linked with competency based approaches, teaching methods, and assessment practices. Drawing on peer reviewed studies, the review showed that higher education increasingly treats employability as a structured educational outcome rather than as an incidental by product of degree completion. Practical and real world learning settings were repeatedly associated with the development of critical thinking and problem solving, while assessment methods were most useful when they captured applied performance rather than narrow content recall. This study is directly relevant because it reinforces the idea that higher education institutions are expected to cultivate cognitive capabilities that employers value in graduates.

(Barachino et al., 2025) reviewed graduate employability interventions in higher education using a systematic review design guided by PRISMA. Their analysis showed that interventions built around practical experience produced the strongest gains in employability, whereas more general skill based and career planning programmes generated less consistent results. The review also stressed that closer communication between universities and labour market actors improves the effectiveness of employability initiatives. The study supports the view that organisational expectations should inform management education, especially where institutions seek to strengthen problem solving, judgement, and adaptability in future graduates.

(Ma et al., 2025) explored critical thinking in higher education through the lens of the Theory of Planned Behavior and tested their model using survey data from 363 undergraduates in Singapore. The study linked attitude, perceived behavioural control, and subjective norms with critical thinking disposition, while also identifying a gap between disposition and actual critical thinking performance. Their work is especially relevant because it shows that critical thinking is not merely a desirable academic trait but a behavioural capability shaped by educational context and learner psychology. For the present study, this strengthens the argument that organisational leaders may reasonably expect management students not only to value critical thinking but also to demonstrate it in applied settings.

(Dias Oliveira et al., 2024) examined the use of a project based learning approach in a business school to improve critical thinking, team working, and communication skills among first year management and economics students. Using a pre and post design with a large student sample and a control group, the study reported reductions in critical thinking difficulties and improvements in transferable skills across the semester. Although the work centred on pedagogic intervention rather than employer perceptions, it is highly relevant because it shows that business education can actively strengthen the forms of analytical thinking and reasoned response that organisations are likely to expect from management students.

(Azhar et al., 2024) investigated whether learning agility contributes to the work readiness of graduating accounting students in the context of the Fourth Industrial Revolution. Based on questionnaire data from 275 respondents, the study showed that higher intelligence quotient and emotional quotient were associated with stronger learning agility, and that learning agility in turn mediated their relationship with work readiness. The study is particularly significant for the present research because it positions learning agility as a meaningful bridge between individual capability and employability outcomes. It therefore lends support to examining learning agility as one of the key cognitive attributes expected from management students.

(Azalea et al., 2024) analysed the effect of career adaptability on perceived future employability and career motivation among employed and unemployed fresh graduates from Malaysian universities. Using a cross sectional survey of 457 graduates, the study found that adaptability had a positive effect on perceived employability, although the strength of that relationship varied by employment status. While the article did not focus directly on management students, it is relevant because adaptability and employability were shown to move closely together. This has clear implications for the present study, where learning agility is treated as an important part of how organisational leaders evaluate student preparedness.

(Eimer & Bohndick, 2023) conducted a systematic literature review to identify and classify employability models used in higher education. Their analysis identified 21 models and frameworks and showed that no single model could adequately capture the full complexity of employability across contexts. They also argued that institutions need to clarify their own educational orientation before selecting an employability framework for curriculum design. This is relevant to the present study because it highlights the need for context specific evidence when identifying which competencies matter most. In that sense, examining organisational leaders' expectations of critical thinking, problem solving, decision making, and learning agility offers a more focused contribution than broad employability models alone.

(Álvarez Huerta et al., 2023) examined the relationship between critical thinking disposition and student engagement among 836 students from two universities in Spain. The study found a direct positive relationship between critical thinking disposition and important forms of engagement, including reflective learning and participation in high impact practices. This article is relevant because it suggests that critical thinking is tied not only to academic reasoning but also to the wider quality of student involvement in higher education. For the present study, it underlines why organisational leaders may treat critical thinking as a core expectation rather than a peripheral graduate attribute.

(Ab Jalil et al., 2022) developed and tested a model of learning agility and future readiness using data from 209 Malaysian university students. Through a PLS SEM approach, the study showed that curriculum, learning ecosystem, and learning experience positively shaped learning agility, and that learning agility significantly predicted future readiness. The article is important for the present research because it gives strong empirical support to the educational value of agility in contemporary higher education. It also

connects agility with the ability to respond flexibly and make informed decisions, which aligns closely with the present study's concern for workplace relevant cognitive skills.

(Bolton King, 2022) examined whether a classroom based voluntary mentoring scheme could improve undergraduate employability before graduation. Across a three year pilot, senior students mentored junior students, and the results indicated gains in self confidence, self efficacy, and interpersonal communication, all of which were treated as important employability related capacities. Although the study was not limited to the four focal variables of the present research, it is relevant because it shows that employability development in higher education is strengthened when students are placed in active, responsibility bearing roles. This helps explain why organisational leaders may value cognitive and adaptive qualities that go beyond academic knowledge alone.

(Calma & Cotronei Baird, 2021) investigated how critical thinking is demonstrated and assessed in business education. Using 100 group reports from a master's level business analysis subject and a framework based assessment rubric, the study showed that students often struggled to demonstrate clear evidence of critical thinking across important dimensions. The authors therefore proposed practical guidance for educators seeking to improve critical thinking through assessment design. This study is especially relevant to the present research because it sits directly within business education and highlights a continuing challenge: although critical thinking is valued, its visible demonstration among business students cannot be assumed. That concern closely connects with organisational leaders' expectations of management students.

(Abelha et al., 2020) conducted a systematic review using PRISMA to examine graduate employability and competence development in higher education. Analysing 69 papers from Web of Science and Scopus, the review reported a persistent mismatch between graduate competences and employers' needs, while also showing that higher education institutions increasingly attempt to foster employability through innovation and collaboration. The review is highly relevant because it frames employability as a competence based concern rather than a narrow employment outcome. It also supports the premise of the present study that institutions need clearer evidence on the specific higher order cognitive skills that employers and organisational leaders expect from students.

1.3 RESEARCH OBJECTIVE

To examine the cognitive skills that organisational leaders expect from management students, particularly in relation to critical thinking, problem-solving, and learning agility.

1.4 RESEARCH METHODOLOGY

1.4.1 Research Design

The study employed a descriptive survey design to examine the cognitive skills that organisational leaders expect from management students, with particular attention to critical thinking, problem-solving, and learning agility. This design was appropriate because the study sought to capture and describe respondents' expectations in a structured and measurable form without manipulating any study condition. The use of a questionnaire-based design was also suitable for obtaining standardised responses across the selected cognitive skill domains.

1.4.2 Research Approach

A quantitative research approach was adopted. This approach was appropriate because the study relied on structured Likert scale responses and used statistical techniques to summarise the data and test the stated

hypotheses. The quantitative orientation also enabled the researcher to examine the extent to which organisational leaders' expectations regarding each cognitive skill dimension differed from the neutral midpoint of the response scale.

1.4.3 Population and Sample

The target population comprised organisational leaders whose views were considered relevant for assessing the cognitive skills expected from management students. The study used a sample of 30 organisational leaders. This sample size was aligned with the approved study framework and was adequate for generating preliminary quantitative evidence on the four cognitive skill dimensions examined in the study.

1.4.4 Research Variables

The study focused on organisational leaders' expectations of cognitive skills among management students. Operationally, these expectations were examined through three dimensions: critical thinking, problem-solving, and learning agility. Critical thinking referred to the expected ability of management students to analyse, evaluate, question, interpret, and reflect on managerial issues. Problem solving referred to the expected ability to identify organisational problems and develop appropriate solutions. Learning agility referred to the expected ability to adapt, learn from experience, and respond effectively to new tasks and changing work requirements. These variables were directly aligned with the study objective and the three null hypotheses.

1.4.5 Instrument Development and Measurement

Data were measured through a structured questionnaire consisting of 15 Likert statements distributed equally across the three variables. Five statements were used to measure critical thinking, five to measure problem-solving, and five to measure learning agility. A five point Likert scale was used for all items, ranging from 1 for strongly disagree to 5 for strongly agree. The instrument was designed to obtain consistent responses on each dimension so that item scores could be aggregated into construct level mean values for subsequent analysis.

1.4.6 Data Collection Procedure

Data were collected from the selected organisational leaders using the structured questionnaire developed for the study. The responses were recorded in a form suitable for quantitative tabulation and statistical analysis. The procedure was intended to ensure uniformity in the measurement of all four cognitive skill dimensions across the full sample.

1.4.7 Reliability of the Instrument

The internal consistency of the instrument was assessed using Cronbach's alpha, which is a widely accepted method for evaluating the reliability of multi item scales. This procedure was appropriate because each cognitive skill dimension was measured through multiple Likert statements. In methodological terms, Cronbach's alpha values at acceptable levels indicate that the instrument items demonstrate adequate consistency for quantitative analysis, although such evidence should be interpreted cautiously and in relation to the study context.

1.4.8 Statistical Tools and Techniques

Descriptive statistics and one sample t tests were used for data analysis. Descriptive statistics, including the mean, standard deviation, were applied to summarise the response pattern for each cognitive skill dimension. The one sample t test was used to test each null hypothesis by examining whether the observed mean score for each construct differed significantly from the neutral midpoint of the scale.

1.5 LIKERT STATEMENTS

The following were the Likert Statements which formed the basis for the collection of primary data

Table 1.1: Organisational leaders' expectations regarding “Critical Thinking” among management students

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CT1	To analyse situations logically before reaching conclusions.	0	3	5	10	12
CT2	To evaluate information critically before making academic or professional judgements.	1	3	4	6	16
CT3	To question assumptions when addressing managerial issues.	1	5	6	7	11
CT4	To interpret complex business information in a reasoned manner.	1	0	10	12	7
CT5	To apply critical reflection when examining organisational problems.	2	3	8	2	15

The item level pattern for critical thinking shows generally strong agreement across the statements. The highest support appeared for evaluating information critically and analysing situations logically, while positive support was also evident for questioning assumptions and interpreting complex business information. These findings suggest that organisational leaders attach considerable value to reflective and reasoned thinking in management students.

Table 1.2: Organisational leaders' expectations regarding “Problem-Solving” among management students

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PS1	To identify problems accurately in organisational settings.	1	5	8	7	9
PS2	To generate practical solutions to managerial challenges.	1	5	7	5	12
PS3	To resolve workplace issues in a systematic manner.	2	3	7	5	13
PS4	To apply analytical skills when solving business problems.	1	5	4	10	10
PS5	To consider alternative solutions before addressing organisational problems.	2	4	6	7	11

The responses relating to problem solving indicate a consistently positive but slightly more moderate pattern. Stronger agreement was observed for generating practical solutions and resolving workplace issues systematically, while the remaining items also attracted favourable support. Overall, the findings imply that organisational leaders expect management students to approach business problems analytically and respond with workable solutions.

Table 1.3: Organisational leaders' expectations regarding "Learning Agility" among management students

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
LA1	To adapt quickly to new organisational situations.	1	2	8	10	9
LA2	To learn from experience and apply that learning effectively.	4	5	5	8	8
LA3	To remain open to new ideas and changing work requirements.	2	5	3	9	11
LA4	To acquire new skills continuously to meet organisational expectations.	0	6	3	8	13
LA5	To respond positively to unfamiliar tasks and responsibilities.	3	3	6	10	8

The findings for learning agility show a positive yet comparatively moderate level of agreement. Greater support was observed for acquiring new skills, adapting to new situations, and remaining open to change, although learning from experience attracted slightly more mixed responses. Even so, the pattern indicates that organisational leaders expect management students to be flexible, responsive, and willing to learn continuously.

1.6 HYPOTHESES

H₀₁: There is no significant expectation among organisational leaders regarding the critical thinking skills of management students.

H₀₂: There is no significant expectation among organisational leaders regarding the problem-solving skills of management students.

H₀₃: There is no significant expectation among organisational leaders regarding the learning agility of management students.

For the purpose of testing the above-mentioned hypothesis, one sample t-test was applied

Table 1.4: Hypotheses Testing

Hypothesis	H ₀₁	H ₀₂	H ₀₃
Construct	Critical Thinking	Problem Solving	Learning Agility
n	30	30	30
Mean	3.9	3.72	3.68

Std. Deviation	0.79	0.89	0.82
Std. Error Mean	0.15	0.16	0.15
t	6.21	4.42	4.54
df	29	29	29
p	<.001	<.001	<.001
Mean Difference	0.9	0.72	0.68
Decision	Rejected	Rejected	Rejected

Interpretation of Results

For critical thinking, the descriptive results showed a mean of 3.90 and a standard deviation of 0.79 for 30 respondents. A one sample t test indicated that the mean score differed significantly from the neutral midpoint, $t(29) = 6.21$, $p < .001$, with a mean difference of 0.90. This result suggests that organisational leaders hold significantly positive expectations regarding the critical thinking skills of management students.

For problem solving, the mean score was 3.72 with a standard deviation of 0.89. The one sample t test revealed a statistically significant result, $t(29) = 4.42$, $p < .001$, with a mean difference of 0.72. This indicates that the expectation of problem solving skills among management students was significantly above the neutral point of the scale.

For learning agility, the mean score was 3.68 and the standard deviation was 0.82. The one sample t test confirmed a statistically significant difference from the neutral midpoint, $t(29) = 4.54$, $p < .001$, with a mean difference of 0.68. The result indicates that organisational leaders expect management students to demonstrate learning agility to a meaningful extent.

1.7 OVERALL CONCLUSION

The study concludes that organisational leaders hold significant expectations regarding the cognitive skills of management students across all three dimensions examined. Critical thinking, problem-solving, and learning agility all recorded mean scores above the neutral point, and each construct showed a statistically significant result in the one-sample t-test. These outcomes indicate that cognitive readiness is considered an important attribute for management students from the perspective of organisational leaders.

The findings further show that critical thinking was the most strongly endorsed dimension, while problem-solving and learning agility also received clear positive support. On this basis, the study contributes empirical evidence that organisational leaders expect management students to possess higher-order cognitive capabilities that can support academic preparation and future workplace performance.

1.8 SUGGESTIONS BASED ON FINDINGS

1. Management education programmes should place greater emphasis on critical thinking exercises that require students to analyse situations logically and evaluate information carefully.
2. Classroom activities should include more case based tasks that strengthen students' ability to interpret complex business situations in a reasoned manner.
3. Institutions should design learning experiences that encourage students to question assumptions rather than accept managerial issues at face value.
4. Problem based learning should be integrated more systematically into the curriculum so that students can practise identifying and resolving organisational challenges.

5. Students should be given structured opportunities to generate multiple solutions to business problems before selecting the most suitable option.
6. Management programmes should incorporate analytical problem solving workshops that connect theory with practical workplace situations.
7. Institutions should encourage the use of evidence-based reasoning so that students learn to analyse information critically in academic and professional contexts.
8. Learning environments should expose students to dynamic and unfamiliar scenarios in order to strengthen learning agility.
9. Programmes should promote adaptability by engaging students in new tasks, changing responsibilities, and evolving problem contexts.
10. Students should be encouraged to reflect on experience and apply prior learning to new managerial situations.
11. Industry oriented projects may be used to align classroom learning with the actual cognitive expectations held by organisational leaders.
12. Management institutions should periodically review curriculum content to ensure that the development of cognitive skills remains central to student preparation.
13. Faculty members should adopt teaching strategies that balance conceptual understanding with practical application across all three cognitive skill domains.
14. Students should be assessed not only on subject knowledge but also on their demonstrated capacity for analysis, solution development, and adaptability.
15. Collaboration with organisational leaders may help institutions refine training activities so that management students are better prepared for professional expectations.

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