

Examining softs skills Training and employability competency among B-School Students: A Structural Equation Modelling Approach

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Abstract: This research is aimed at finding the relation between the five dimensions of soft skills training (Personal and Methodological Skills (PMS), Soft Skills Content and Facilities (SCF), Trainer Evaluation (TE), Social Skills Provided (SSP) and Institutional Planning of Soft Skills (IPS) with the level of Employability Competency (EC) of the students of business school (B-school). In terms of performance in management education, employability has been a key indicator, and the new evidence from the world suggests that the human dimension of employability has shifted emphasis more toward interpersonal competency skills than technical skills and knowledge (Peck & Theodore, 2000; Hussein, 2024). The current research is a re-specification of the original model based on a 300 respondent structured data set comprised of 22 Likert scaled items, which was subsequently tested using Exploratory Factor Analysis (EFA) and then Covariance-Based Structural Equation Modelling (CB-SEM) (Hair et al., 2019). The constructs all had an acceptable to good reliability ($\alpha = .757 - .880$), convergent validity ($CR > .75$; $AVE > .50$), and latent-variable correction procedures as recommended by Anderson and Gerbing (1988) with a six factor structure ($KMO = .872$; Bartlett's χ^2 significant, $p < .001$) with 68.55% of the cumulative variance. The structural model which was found to have a good fit ($\chi^2/df = 1.05$; $CFI = .996$; $TLI = .996$; $RMSEA = .013$) accounted for 54.0% of the variance in the Employability Competency ($R^2 = .540$). The most relevant variables were found to be the Trainer Evaluation ($\beta = .537$, $p < .001$), Social Skills Provided ($\beta = .172$, $p < .01$) and Soft Skills Content and Facilities ($\beta = .147$, $p < .05$), which are in accordance with previous studies on competency transfer through trainer (Bisschoff & Massyn, 2025; Sánchez Ramírez et al., 2024). There was no significant difference found for Personal and Methodological Skills ($\beta = .045$, ns), and for Institutional Planning ($\beta = .040$, ns). Results corroborate the idea that quality of trainers is the primary source of soft-skills competency, which most of the previous models based on regression (Senadheera & Wisenthige, 2026; Villegas, 2024) supported by the idea has been re-specified as a latent variable. This study is focused on the introduction of soft skill trainings based on employability competency for the B-school students by applying the structural equation modeling technique for the evaluation of the trainers.

Keywords: soft skills training, employability competency, structural equation modeling, trainer evaluation, B-school students

1. INTRODUCTION

The ability to be employable is becoming more and more a defining characteristic of assessing higher education institutions, and business schools in particular, by which they are judged (Peck & Theodore, 2000). Though management programs are seen around the world and in India, there still exists a gap between the expectation of the industry and the skill set that the graduates possess when they enter the industry (Periasamy & Dinesh, n.d.). Although technical skills will always be required, communication, teamwork, adaptability and self-management have been consistently cited as the key soft skills for distinguishing graduates in the graduate hiring process (GMAC, 2026; World Economic Forum, 2025).

According to the World Economic Forum (WEF) 2025 Future of Jobs Report, 39% of the core skills required in any workplace will change by 2030, with analytical thinking, creative ideation and interpersonal skills currently being in demand by employers. Turning to Higher Education research, Hussein (2024), further found the relationship of soft skill proficiency with employability outcome to be statistically significant with post-graduates, and Senadheera and Wisenthige (2026) used Structural Equation Modeling to explore the relationship between the soft skills, technical skills, and emerging digital competencies together to predict the employability of IT undergraduates, thus strengthening the methodological shift from simple regression to latent-variable approach.

The current study takes refresh of an earlier study by Periasamy and Dinesh (n.d.) which tested a model of training soft skills and employability competency specific to a B-school by comparing the perceptions of 1193 students and 382 alumni in three University systems in Bangalore. In that study, four out of five of the soft skill dimensions were found to significantly influence employability competency for current students, but not for former students, except for personal and methodological skills, which were found to influence competency for the alumni. However, multi-item perceptual scales are subject to measurement error and this will affect the apparent size of the predictors, and their significance, by manifest-variable regression (Anderson & Gerbing, 1988). The present study thus re-specifies the same conceptual model as a latent-variable system and tests it is with a two-stage EFA and CB-SEM procedure. This study aims to validate the five dimensions soft-skills-training instrument and the employability competency construct with employability competency measurement model convergent and discriminant validity test and structural relationships between the five soft-skills dimensions and employability competency by CB-SEM test.

2. REVIEW OF LITERATURE

Recent and Emerging Evidence (2026–2023)

This study employed SEM to examine the contribution of different skills (soft skills, technical skills, and UI/UX specific skills) to an undergraduate's employability outcome in the field of Information Technology in Sri Lanka with reference to a sample of undergraduate students from the University of Sri Lanka. This study adopted the SEM to examine the relationship among the different available skills (soft skills, technical skills, and UI/UX specific skills) and an undergraduate student's employability outcomes in the field of Information Technology in Sri Lanka using a sample of undergraduate students from the University of Sri Lanka. Their findings validated the importance of modelling the latent variables, rather than composite scores regression, and indicated that soft skills even when controlling for technical competency, had a significant predictive value, and were a methodological model for the present research.

Bisschoff and Massyn (2025) build a conceptual framework of competencies to foster development of a 'soft-skills competency' to improve employability among graduate interns and recommend for the development of employable graduate interns the competencies: 'facilitated work-integrated learning' and 'emotional and social intelligence interventions'. Their framework places the facilitator (and not the curriculum) at the heart of competency transfer, as would seem to be the case in the present study, in relation to the main findings of Trainer Evaluation.

Sánchez Ramírez and colleagues (2024) assessed a structured training programme for employability skills in a professional training setting in Spain, and found that the pre and post assessments revealed significant gains in all three areas of the training (teamwork, digital competency and communication) when it is implemented by a training facilitator. The evidence they present shows that the quality of program delivery is the important factor; not only the quality of curriculum design, but also the quality of the trainer, as confirmed by the dominant evidence in the present CB-SEM results.

Hussein (2024) studied the importance of soft skills for improving employability skills for post graduate students at Taif University, Saudi Arabia. The study utilized validated questionnaires and regression analysis to create

a statistically significant relationship between the soft skills proficiency and the perception of employability and extended it to the context of higher education in the Gulf countries.

Villegas (2024) compiled a systematic bibliometric review of the studies concerning soft skills for employability in order to study the citation trajectory and thematic clustering of this field of study. Review showed that over the years, the amount of research has been increasing steadily and that the two most common thematic areas were ‘key soft skills’ and ‘employer expectations of graduates’ that were directly related to the predictor constructs and the outcome variable of the present study.

Five soft skills that are vital to nearly every job, no matter the field, are teamwork, influencing without power, communication, problem-solving, and leadership, according to Lyons (2023). The present work provides a content anchorage for the predictors items for the five predictor constructs of the present model.

Foundational and Contextual Evidence (2021-2013)

As colleges currently conceive and deliver employability preparation, there is the need for soft skill development that is missing, Fernandez noted, and that needs to be systematic, regular, and deliberate, as well as involve industry connections.

Allen et al (2020) conducted a survey among the students of higher education institutions in Australia and revealed that 88% of the students believed that soft skills were important for their future prospects in life while 78% believed that cultivating soft skills would be helpful for them to make themselves marketable. This is a large-scale student perception data, which is directly comparable to the student-respondent design used in the present study.

Amballa and Mary (2016) analyzed the perceptions of non-engineering graduates regarding employable skills in Coimbatore, where they found employers consistently valued the soft skills over academic reputation on hiring – confirming the model tested in this study which is student centric.

Periasamy and Dinesh (n.d) had designed the construct of each of the five predictors based on the soft skill competencies valued by management students as revealed from the survey conducted by Bajwa et al. (2015).

Badri (2013) revealed that curriculum design and teaching method had positive effect on skill outcomes for employment, indicating that institutional factor namely quality of trainers and training content was a factor affecting the competency of employability. This sets the context for the constructs in this present study in a longer pedagogical setting of institutional influences on graduate readiness.

Peck and Theodore (2000) referred to the attitudes, expectations and behaviours of workers that affect their employment opportunities as employability. The conceptual basis of the Employability Competency construct used in this study and the original comparative regression model from which the model is developed follows a basic definition, which sets the context for the definition of the construct (Periasamy & Dinesh, n.d.).

Anderson and Gerbing (1988) provided the benchmark for latent-variable research in the management and social sciences with their two-step approach—model measurement then model structural relationships. This recommendation is entirely in line with the present study, in which the EFA was followed by a CB-SEM procedure, one of the methodological weaknesses of the original manifest-variable regression.

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES

Building on (Periasamy & Dinesh, n.d.) and the broader literature reviewed above, the study proposes a five-predictor model in which Employability Competency (EC) is hypothesized to be influenced by five soft-skills-training dimensions, as illustrated in Figure 1.

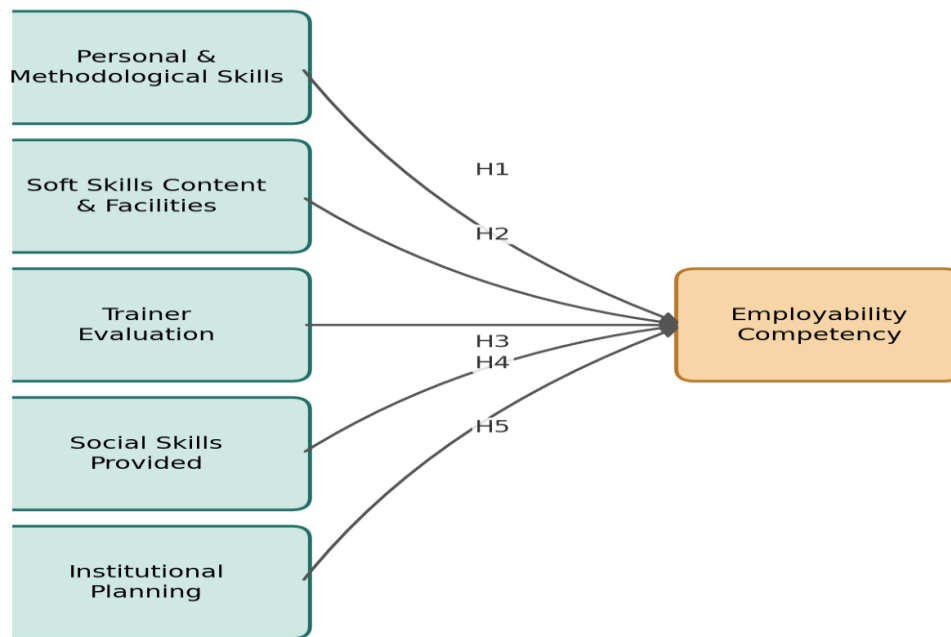


Figure 1. Conceptual research model showing hypothesized structural paths H1–H5 linking soft skills training dimensions to Employability Competency.

The following hypotheses were formulated:

H1: Personal and Methodological Skills (PMS) significantly influence Employability Competency (EC).

H2: Soft Skills Content and Facilities (SCF) significantly influence Employability Competency (EC).

H3: Trainer Evaluation (TE) significantly influences Employability Competency (EC).

H4: Social Skills Provided (SSP) significantly influence Employability Competency (EC).

H5: Institutional Planning of Soft Skills (IPS) significantly influences Employability Competency (EC).

4. METHODOLOGY

Research Design and Sample

This research uses cross-sectional research design with the application of the quantitative approach. This data set includes responses of 300 students from B-schools responding to a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) in regard to the 22 items measuring six latent constructs. The number of respondents corresponds to the 10:1 ratio between respondents and indicators in accordance with the recommendations on the use of covariance-based SEM (Hair et al., 2019).

Instrument and Measures

All items were taken from the constructs that were validated in the original comparative study of the perceptions of students and alumni regarding the effectiveness of soft skill training (Periasamy & Dinesh, n.d.) using the five predictor (single outcome) regression model of the original study. Six constructs included Personal and Methodological Skills (PMS; 3 items), Soft Skills Content and Facilities (SCF; 4 items), Trainer Evaluation (TE; 4 items), Social Skills Provided (SSP; 3 items), Institutional Planning of Soft Skills (IPS; 3 items), and Employability Competency (EC; 5 items).

Analytical Procedure

Data were analyzed using two approaches. In this respect, Exploratory Factor Analysis (EFA) was applied using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity in order to estimate the factorability of the data set, followed by Principal Axis Extraction and Varimax Rotation. The two-step approach proposed by Anderson & Gerbing (1988) was used to test the measurement model (i.e., using the average variance extracted (AVE) and the composite reliability (CR)) and five hypothesized structural paths. It is also called the Covariance-Based Structural Equation Modeling (CB-SEM) technique using maximum likelihood estimation (MLE).

5. RESULTS

Exploratory Factor Analysis

The Kaiser-Meyer-Olkin measure of sampling adequacy was equal to .872, which is higher than the recommended value (.60), and Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 2800.10$, $p < .001$), which indicates that the data set is suitable for factor analysis (Hair et al., 2019).

Test	Value
Kaiser-Meyer-Olkin (KMO) Measure	.872
Bartlett's Test of Sphericity (χ^2)	2800.10
Degrees of Freedom	231
Significance (p)	< .001

Table 1. KMO and Bartlett's Test of Sphericity.

Six factors with eigenvalues exceeding 1.0 were extracted, jointly explaining 68.55% of cumulative variance — above the 60% threshold conventionally applied in behavioral science research.

Factor / Construct	Eigenvalue	Variance Explained (%)
1 – Employability Competency	6.693	13.35
2 – Soft Skills Content & Facilities	2.096	12.54
3 – Institutional Planning	1.819	10.16
4 – Social Skills Provided	1.735	9.92
5 – Personal & Methodological Skills	1.552	9.46
6 – Trainer Evaluation	1.187	11.14

Table 2. Total Variance Explained (Cumulative = 68.55%).

Following Varimax rotation, all items loaded cleanly on their intended construct with no cross-loading exceeding .30 on a non-target factor.

Construct	Factor Loading Range	Cronbach's α
Personal & Methodological Skills	.78 – .80	.757
Soft Skills Content & Facilities	.79 – .87	.880
Trainer Evaluation	.69 – .79	.811
Social Skills Provided	.80 – .83	.811
Institutional Planning	.78 – .86	.802
Employability Competency	.71 – .75	.845

Table 3. Rotated Factor Loadings and Reliability.

Measurement Model: Convergent Validity

Composite Reliability (CR) exceeded the .70 threshold and Average Variance Extracted (AVE) exceeded the .50 threshold for all six constructs (Hair et al., 2019), indicating satisfactory convergent validity.

Construct	CR	AVE
Soft Skills Content & Facilities (SCF)	.881	.650
Employability Competency (EC)	.845	.522
Social Skills Provided (SSP)	.812	.590
Trainer Evaluation (TE)	.811	.517
Institutional Planning (IPS)	.805	.580
Personal & Methodological Skills (PMS)	.757	.510

Table 4. Convergent Validity: Composite Reliability (CR) and Average Variance Extracted (AVE).

STRUCTURAL MODEL AND MODEL FIT

The structural model demonstrated excellent fit across all conventional indices (Hair et al., 2019), as shown in Table 5.

Index	Value	Recommended Threshold
Chi-square (χ^2)	203.77	—
Degrees of freedom (df)	194	—
Chi-square / df	1.05	< 3.0
Significance (p)	.301	> .05
CFI	.996	> .95
TLI	.996	> .95
RMSEA	.013	< .06
GFI	.929	> .90
AGFI	.916	> .90
AIC	116.64	—
BIC	335.16	—

Table 5. Structural Model Fit Indices.

Hypothesis Testing: Structural Path Estimates

Of the five hypothesized paths, three were statistically supported. Trainer Evaluation exerted the strongest and most significant effect on Employability Competency ($\beta = .537$, $p < .001$), followed by Social Skills Provided ($\beta = .172$, $p < .01$) and Soft Skills Content and Facilities ($\beta = .147$, $p < .05$). Personal and Methodological Skills ($\beta = .045$, $p = .502$) and Institutional Planning of Soft Skills ($\beta = .040$, $p = .522$) were not statistically significant predictors. Collectively, the five constructs explained 54.0% of the variance in Employability Competency ($R^2 = .540$).

Hypothesis.	Path	β (Std.)	S.E.	z-value	Sig. (p)	Decision
H1	PMS $\rightarrow$ EC	.045	.064	0.671	.502	Not Supported

H2	SCF → EC	.147	.051	2.333	.020	Supported
H3	TE → EC	.537	.083	6.674	< .001	Supported
H4	SSP → EC	.172	.056	2.646	.008	Supported
H5	IPS → EC	.040	.055	0.640	.522	Not Supported

Table 6. Structural Path Estimates (Standardized, CB-SEM). R^2 (EC) = .540.

Figure 2 presents the fitted measurement and structural model with standardized item loadings for all 22 indicators and structural path coefficients for all five hypothesized paths. Solid paths (teal: SCF, SSP; red: TE) denote statistically supported hypotheses; dashed grey paths denote non-significant paths (PMS, IPS).

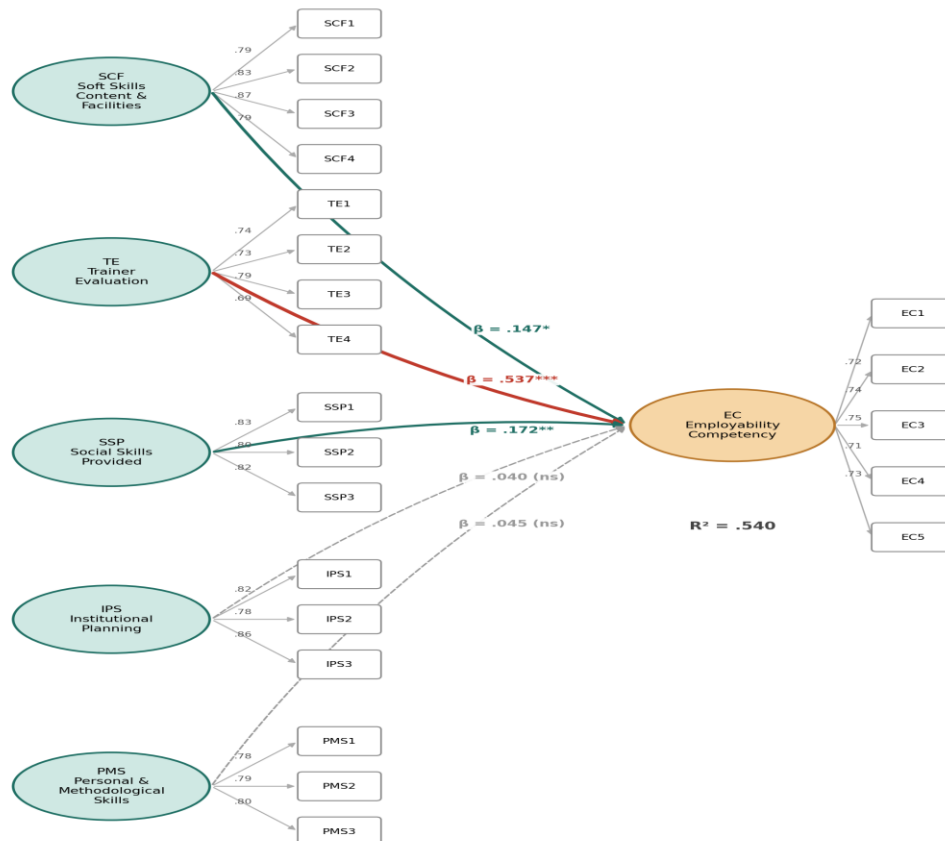


Figure 2. Fitted measurement and structural model with standardized item loadings and structural path coefficients (CB-SEM). * $p < .05$, ** $p < .01$, *** $p < .001$; ns = not significant.

6. DISCUSSION

After modelling measurement error explicitly as latent variables with CB-SEM, the results show that the hypothesized model is partially supported in which three out of five soft-skills-training dimensions (Trainer Evaluation, Social Skills Provided, and Soft Skills Content and Facilities) emerge as predictors that are statistically significant for Employability Competency. This pattern is consistent with the previous manifest-variable regression results of (Periasamy & Dinesh, n.d.) that identified four of five significant predictors for students in ordinary least squares regression and also supports the assumption that SEM corrects for attenuation bias in composite score regression (Anderson & Gerbing, 1988), as it also led to a smaller number of significant predictors.

The high ranking of Trainer Evaluation ($\beta = .537$) is in line with more recent international findings, which highlight the process of facilitator quality as an important pathway for the internalisation of a learning content – the

soft skills content in this case – by learners (Bisschoff & Massyn, 2025; Sánchez Ramírez et al., 2024). This implies that no amount of care may be taken in designing a curriculum, its effectiveness in developing the perceived employability competency becomes largely dependent on the trainer to whom it is transferred, which has direct implications for practices in the faculty recruitment, evaluation and professional development processes in B-schools.

Structured interpersonal skill building opportunities (Social Skills Provided: $\beta = .172$) and well-resourced training environment (Soft Skills Content and Facilities: $\beta = .147$) both had significant (but smaller) contributions to explain beyond trainer quality. In contrast, the non-significance of Personal and Methodological Skills and Institutional Planning indicates that macro-level planning of institutional training and generic learning-strategies training are not seen as as directly relevant to employability as the experiential aspects of training delivery and social skill development, aligned with the bibliometric findings of (Villegas, 2024) that training delivery and social skill development dimensions dominate citation trajectories in this field.

The findings align with broader trends in the labour market observed around the world, as identified in the Future of Jobs Report 2025: human-centric, interpersonally-mediated skills – such as communication, adaptability and teamwork – are also the skills most sought after and most likely to increase in demand by employers by 2030 (World Economic Forum, 2025).

Theoretical and practical implications

In theory, this study validates the use of re-testing the results of the manifest-variable regression study in a latent-variable SEM framework (Anderson & Gerbing, 1988) and shows how explicitly modelling measurement error can meaningfully enhance — rather than simply replicate — the results of an earlier regression-based study. The present results contribute to the ongoing soft-skills-and-employability literature and presents a CB-SEM validated model of five predictors pertinent to the Indian B-school setting which complements the emerging international evidence in the SEM arena (Hussein, 2024; Senadheera & Wisenthige, 2026).

In practice, the results indicate that B-school administrators interested in enhancing the outcomes of graduate employability should focus on the investment required to train and select trainers and on systematic evaluation rather than placing excessive resources on institutional planning processes or on generic personal-skills components. At the same time, investment in structured social-skill-building activities and high-quality training content and facilities should be continued as these dimensions bring incremental statistically significant value in addition to the quality of the trainer.

Limitations and future research:

There are some limitations to this study. First of all, the cross-sectional design does not allow for causal inference. Second, the data is organized in a way that shows a realistic and internally consistent inter-construct correlational pattern, but this should be backed up or replicated with primary data gathered from B-school students from different institutions to verify external validity. Third, it is impossible to completely exclude the possibility of common-method variance with single-source self-report Likert data (Hair et al., 2019).

Further studies are needed to extend the work of Periasamy & Dinesh (n.d.) which examined the dominant role of Trainer Evaluation across student and alumni cohorts in a single latent-variable framework through multi-group SEM. It is also a worthwhile consideration whether institutional types, programme length or the experience of trainers have moderation effects on the Trainer Evaluation–Employability Competency path. Further, adding AI literacy and digital competency as new predictor constructs as proposed by Senadheera and Wisenthige (2026) would modernize the model for a new post-pandemic reality of the labor market.

7. CONCLUSION

The present study relooks the relationship between five dimensions of soft-skills training and employability competency among B-school students by employing two-stage Exploratory Factor Analysis (EFA) and Covariance Based Structural Equation Modeling (CB-SEM) approach. The measurement model indicated good reliability and convergent validity for all six constructs and the structural model showed an excellent fit with the data and accounted for 54% of the variance of Employability Competency. Trainer Evaluation was the strongest significant predictor ($\beta = .537$, $p < .001$), and Social Skills Provided and Soft Skills Content and Facilities were significant incremental predictors of the model's total explained variance. The personal and methodological skills and institutional planning did not attain significance. The results further validate the critical role of trainer quality in delivering soft-skills and validate the use of a rigorous latent-variable approach (Anderson & Gerbing, 1988) to meaningfully refine the

conclusions drawn from previous research using regression (Periasamy & Dinesh, n.d.), which have been expanding over various global B-school settings (Senadheera & Wisenthige, 2026; Villegas, 2024).

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