



Effectiveness of industry–academic partnerships in improving the recruitment of job-ready apprentices

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Abstract

The increasing mismatch between academic preparation and workplace requirements has created difficulties for employers seeking job-ready apprentices. Industry–academic partnerships provide a structured approach for addressing this problem by integrating employer participation into curriculum design workplace training competency assessment mentoring and recruitment. This paper evaluates the potential effectiveness of such partnerships using an illustrative comparative dataset of 508 participants from apprentices Industry and academia representatives. The dataset includes 378 apprentices enrolled in 99 various food industries like as Haldi Ram Bikano Bika Ji Moreish Food etc from 31 academic Institutions. The analysis measures the effectiveness of Industry-Academia partnership in produce ready for job after completion of their training programs. The findings suggest that industry–academic partnerships improved the transition from education to employment when employers are involved throughout the apprenticeship process including recruitment course curriculum of job role and structured training program. The details of finding are giving in different sections of this paper.

Keywords: Apprenticeships industry–academic partnerships job readiness recruitment employability work-integrated learning workforce development

Introduction

Employers in technical and professional sectors increasingly require recruits who can contribute to workplace activities with limited additional training. However, many graduates and apprenticeship applicants possess theoretical knowledge without sufficient experience in applying that knowledge to real work situations. This creates additional recruitment costs longer onboarding periods and uncertainty about whether a candidate will perform effectively after appointment.

Industry–academic partnerships are intended to reduce this gap. Such partnerships connect educational institutions with employers through curriculum development practical projects workplace placements mentoring technical assessment and recruitment pathways. The objective is not only to improve learning but also to produce apprentices whose competencies are directly relevant to available jobs.

Previous research has emphasized the contribution of work experience to graduate employability ^[1]. Research on employability programs has also shown that outcomes vary depending on how programs are designed and implemented ^[2]. Similarly, recent work on project-based learning indicates that collaboration with industry can improve student's future readiness when authentic tasks and employer feedback are integrated into education ^[3].

Despite these findings the effectiveness of partnerships is often described in general terms. Fewer studies evaluate multiple outcomes simultaneously including recruitment efficiency technical readiness employer satisfaction and post-apprenticeship retention. This paper addresses that gap through a comparative research framework.

Industry–Academic Partnerships and Apprenticeship Recruitment

a. Definition of a Job-Ready Apprentice

In this study a job-ready apprentice is defined as an apprentice who can perform entry-level occupational tasks safely and effectively while demonstrating the ability to:

- apply technical knowledge.
- use relevant tools and equipment.
- solve routine workplace problems.
- communicate with supervisors and colleagues.
- respond to feedback.
- follow workplace procedures. and
- learn new processes when required.

Job readiness is therefore treated as a combination of technical competence professional behaviour and adaptability.

b. Proposed Partnership Mechanisms

The expected benefits of an industry–academic partnership arise through several mechanisms.

First curriculum alignment allows education providers to include technologies procedures and standards that are currently used in the workplace. Second workplace exposure gives apprentices opportunities to practice skills under realistic conditions. Third joint assessment provides employers with more credible evidence of competence. Fourth mentoring supports the development of professional behaviours. Finally, early employer engagement may reduce uncertainty during recruitment.

Research Methodology

a. Research Design

A comparative quantitative design was used to demonstrate how partnership effectiveness can be evaluated. Two apprenticeship pathways were compared:

- **Industry–Academic Partnership pathway:** a program involving curriculum collaboration recruitment of apprentices on On Job Training (OJT) their training assessment and absorption apprentices on establishment payroll.

The data were collected through the shared google sheet to apprentices of various food industries Industries and academic institutions personal. We have received 508 responses in which 378 responses from apprentices 99 responses from Industry personal and 31 responses from academia.

b. Sample

The survey was based on various questionnaire mentioned in shared google sheet.to different age group of Apprentices industry-academia personal

c. Variables: Following Questions were put through shared google sheet

1. My training program is well coordinated between institution and industry
2. I receive consistent guidance from both academic and industry mentors.
3. The training structure is clearly defined.
4. Communication between institution and workplace is effective
5. Collaboration improves my overall learning experience
6. The apprenticeship has improved my technical skills.
7. I have gained industry-relevant knowledge

8. The program improved my problem-solving ability.
9. The program improved my problem-solving ability.
10. I feel confident to work in a real job environment.
11. My chances of getting employment have improved
12. I have developed soft skills (communication teamwork).
13. There is a difference between what I studied and what is required at work
14. The apprenticeship helped me understand real industry expectations.
15. The program helped bridge the gap between theory and practice
16. My academic curriculum needs more practical exposure.
17. Apprenticeship programs are beneficial for career growth
18. Collaboration improves job readiness.
19. Overall the benefits of apprenticeship outweigh the challenges

d. Data Analysis

Descriptive statistics were used to compare the responses receives from the apprentices Industry and academia personal. Responses were captures in various form like

- a. Agree
- b. Strongly Agree
- c. Disagree
- d. Strongly Disagree
- e. Neutral

Summary of important responses were shown in tabular forms such as

Results and Conclusions

The responses received have been analysed against the question that apprenticeship improved their technical skills.

Table:1(a)

Response Category	Number of Responses	Percentage (%)
Strongly Agree	125	53.4
Agree	100	42.7
Neutral	5	2.1
Disagree	2	0.9
Strongly Disagree	2	0.9
Total	234	100

Table: 1(b)

Age Group	Number of Respondents	Percentage%
<20	75	32.1
21–25	140	59.8
26–30	11	4.7
>30	8	3.4
Total	234	100.0

Table: 1(c)

Interpretation of Data

Measure	Result
Positive Responses (Agree + Strongly Agree)	225 (96.1%)
Neutral Responses	5 (2.1%)
Negative Responses (Disagree + Strongly Disagree)	4 (1.8%)

Table 1(a) shows the distribution of Respondents opinions. Out of 234 respondents 125 (53.4%) strongly agreed and

100 (42.7%) agreed with the statement. This indicates that 96.1% of respondents expressed a positive opinion. Only 5

respondents (2.1%) were neutral while 4 respondents (1.8%) disagreed or strongly disagreed. The findings demonstrate a very high level of agreement and positive perception among the respondents.

Table 1(b) presents the age profile of the respondents. The majority of participants belonged to the 21-25 years age group (140 respondents 59.8%) followed by those below 20 years (75 respondents 32.1%). Respondents aged 26-30 years accounted for 4.7% (11 respondents) while those above 30 years represented 3.4% (8 respondents). The data indicate that the sample was predominantly composed of

young adults between 21 and 25 years of age.

Table 1(c) summarizes the overall response pattern. A total of 225 respondents (96.1%) provided positive responses by selecting either "Agree" or "Strongly Agree." Neutral responses accounted for 2.1% (5 respondents) while only 1.8% (4 respondents) expressed negative opinions through "Disagree" or "Strongly Disagree." These results suggest an overwhelmingly positive attitude toward the subject under study with minimal neutral or negative feedback.

Based on the responses provided for "My chances of getting employment have improved" the summary table is:

Table: 2(a)

Response Category	Frequency	Percentage (%)
Strongly Agree	136	56.7
Agree	93	38.8
Neutral	7	2.9
Disagree	1	0.4
Strongly Disagree	3	1.2
Total	240	100

Table: 2(b)

Age Group	Frequency	Percentage (%)
<20	78	32.5
21-25	143	59.6
26-30	11	4.6
>30	8	3.3
Total	240	100

Table: 2(c)
Interpretation of Data

Category	Frequency	Percentage (%)
Positive (Agree + Strongly Agree)	229	95.4
Neutral	7	2.9
Negative (Disagree + Strongly Disagree)	4	1.7
Total	240	100

Table 2(a) presents the respondents level of agreement regarding the statement. Out of 240 respondents 136 (56.7%) strongly agreed and 93 (38.8%) agreed indicating that a large majority held a favourable opinion. Only 7 respondents (2.9%) remained neutral while 4 respondents (1.6%) expressed disagreement through either "Disagree" or "Strongly Disagree." Overall the results reveal a highly positive attitude among the respondents toward the subject under study.

Table 2(b) shows the age distribution of the respondents. The largest group belonged to the 21-25 years age category accounting for 143 respondents (59.6%). Respondents below 20 years constituted 78 (32.5%) of the sample. The 26-30 years age group represented 11 respondents (4.6%)

while those above 30 years accounted for 8 respondents (3.3%). This indicates that the study sample was predominantly composed of young adults aged 21-25 years. Table 2(c) summarizes the overall response pattern. A total of 229 respondents (95.4%) provided positive responses by selecting either "Agree" or "Strongly Agree." Neutral responses accounted for 7 respondents (2.9%) while only 4 respondents (1.7%) expressed negative opinions. The findings clearly demonstrate an overwhelmingly positive perception of the subject with very few neutral or negative responses indicating strong acceptance and support among the respondents

Based on the responses provided for "Collaboration improves job readiness" the summary table is:

Table 3(a)

Response Category	Frequency	Percentage (%)
Strongly Agree	118	50.40%
Agree	109	46.60%
Neutral	5	2.10%
Disagree	1	0.40%
Strongly Disagree	1	0.40%
Total	234	100.00%

Table 3(b)

Age Group	Frequency	Percentage (%)
<20	75	32.10%
21–25	140	59.80%
26–30	11	4.70%
>30	8	3.40%
Total	234	100.00%

Table 3(c)

Category	Frequency	Percentage (%)
Positive (Agree + Strongly Agree)	227	97.00%
Neutral	5	2.10%
Negative (Disagree + Strongly Disagree)	2	0.90%
Total	234	100.00%

Table 3(a) presents the respondents level of agreement with the statement. Out of 234 respondents 118 (50.4%) strongly agreed and 109 (46.6%) agreed indicating a highly favourable opinion among the participants. Only 5 respondents (2.1%) were neutral while 2 respondents (0.8%) expressed disagreement through either "Disagree" or "Strongly Disagree." The results demonstrate an overwhelmingly positive response toward the

Table 3(b) shows the age distribution of the respondents. The majority of the respondents belonged to the 21-25 years age group accounting for 140 respondents (59.8%). Respondents aged below 20 years constituted 75 (32.1%) of the sample. The 26-30 years age group comprised 11 respondents (4.7%) while those above 30 years accounted for 8 respondents (3.4%). This indicates that the survey mainly represents the opinions of young adults aged 21-25 years.

Table 3(c) provides a summary of the overall response pattern. A total of 227 respondents (97.0%) expressed positive opinions by selecting either "Agree" or "Strongly Agree." Neutral responses accounted for 5 respondents (2.1%) while only 2 respondents (0.9%) gave negative responses through "Disagree" or "Strongly Disagree." The findings clearly indicate a very high level of acceptance and satisfaction among the respondents with positive responses dominating the overall.

Conclusions

The analysis responses reveal a consistently strong positive response from the respondents. In Tables 1(a) 2(a) and 3(a) the combined percentages of "Agree" and "Strongly Agree" responses were 96.1% 95.4% and 97.0% respectively indicating overwhelming support and acceptance of the statements presented. Neutral responses remained very low ranging from 2.1% to 2.9% while negative responses accounted for less than 2% in all cases.

The age-wise distribution shown in Tables 1(b) 2(b) and 3(b) demonstrates that the majority of respondents belonged to the 21-25 years age group (approximately 60%) followed by respondents below 20 years of age (about 32%). This indicates that the study primarily reflects the views and experiences of young adults.

Furthermore the summary interpretations presented in Tables 1(c) 2(c) and 3(c) confirm that positive responses consistently exceeded **95%** demonstrating a high level of agreement satisfaction and favourable perception among respondents. The very small proportion of neutral and

negative responses suggests minimal opposition or dissatisfaction regarding the subject under study.

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