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ASSESSING EFFECTIVENESS OF INDUSTRY CENTRIC UNDERGRADUATE CURRICULUM IN THE SELECTED AFFILIATED COLLEGES OF BHARATHIAR UNIVERSITY, COIMBATORE

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ABSTRACT

The broad objective of the present study is assessing the effectiveness of industry centric curriculum with competence - contribute - support model, which is newly designed by the researcher. Hence the curriculum designed by the University and four autonomous colleges those who introduced the course were selected for the study. There was no sampling technique used because the first batch all final year students of B.Com BPS and BBA BPM (N=150) were taken for the study. All the teachers handling industry institute curriculum from four colleges were contacted for data collection to identify their contribution in inculcation. Separate structured questionnaires were designed for students and faculty members to elicit related information. The collected data were consolidated and analyzed using Structural Equation Model. The constructs taken for the model were infrastructure facility and course design, support of faculty, industry contribution and students competence were used to measure the outcome of industry centric curriculum. The Chi-square degrees of freedom value is 0.000 which is less than 0.05 which indicates perfectly fit. Here GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represent it is a good fit. Based on the results obtained from structural Equation Model for the present study to assess the effectiveness of industry centric curriculum B.Com BPS/BBA BPM, it is concluded that the four important factors that contribute towards the effectiveness of educational innovation are infrastructure facility and course design, support of faculty, industry contribution and students competence.

KEYWORDS: *industry, effectiveness and infrastructure etc.*

INTRODUCTION:

As developing country our nation has growing tremendously through various means of new economic policies, political changes, industrial growth and improved technologies. Changes were made in all the aspects of human beings at significant level, which have greater impact in information, communication, health, sanitation, lifestyle, occupation, income and so on. The only thing which should be touched upon with the sense of consciousness and seriousness is education. As part of holistic changes, there were some changes and modifications in recognition of schools and colleges, NAAC and NIRF to ensure the quality of teaching and learning facilities, outcome of education, students' feedback, placement ratio and all. Industry institute linkage is one of the main emphasized criteria by NAAC and as the first step of industry institute partnership Universities, Colleges and educational institutes had linkages for placement, internship and training of students. As the first, Bharathiar University has introduced an Industry Institute Curriculum with consultation of leading companies of IT and ITeS sector, which leaded introduction of B.Com Business Process Services and BBM Business Process Management.

Statement of the Problem

Every new curriculum should be assessed for its effectiveness to make necessary modifications to suit the stakeholders. There is a wide scope for assessment of the industry institute curriculum with the first batch itself, which will greatly help the academicians, industry partners and especially students to get the real outcome of education.

Objective of the Study

The broad objective of the present study is assessing the effectiveness of industry centric curriculum with competence - contribute - support model, which is newly designed by the researcher.

Specific Objective

• Testing Competence-Contribution-Support mathematical model for assessing the effectiveness of Industry Centric UG curriculum.

Hypothesis

1. Students of Industry Centric UG Curriculum, who don't have any one of the following components such as competence, faculty contribution, industry support will not have expected outcome.

Review of Literature

To succeed in college, career and life in the 21st century, students must be supported in mastering both content and skills. Standards, Assessment, Professional Development, Curriculum & Instruction and Learning Environments are important and taking an aligned, comprehensive approach across all five support systems is a significant challenge for all educators. In addition to core subject mastery, the students are expected to be:

- Critical thinkers
- Problem solvers
- Good communicators
- Good collaborators
- Information technology literate
- Flexible and adaptable
- Innovative and creative
- Globally competent
- Financially literate

Planning for the future and building strategies that will solidify the success of our students is need of the hour. High stakes assessments alone don't generate evidence of the skill sets that the business and education communities believe in. Measure the knowledge of discrete facts, not the ability to apply knowledge in complex situations and environment. There is growing consensus that our education systems should pursue measurement of student outcomes that are:

- Performance-based
- Embedded in curriculum

Based on a common evidentiary model of cognition and learning (Partnership for 21st century skills, 2009).

The quality principles should be followed to contribute to the overall goal of producing competent, caring and qualified professionals in teaching. Professional knowledge, Strategic decision-making, Caring leadership skills, Cross-cutting themes, Learning how to learn, Multicultural perspectives and accuracy, technology, rationale for the assessments, programme decisions and planning based on evidence, influential quality control system, evidence of faculty learning and inquiry and commitment are the determinants of quality teachers (Teacher Education Accreditation Council, 2003).

Any newly introduced programme must demonstrate that there are appropriate and adequate budgetary and other resource allocations for programme space, equipment and supplies to promote success in candidate learning. The financial condition of the institution that supports the programme must be sound, the institution must be financially viable and the resources available to the programme must be sufficient to support the operations of the programme and to promote success in candidate learning. There is an appropriate level of institutional investment in and commitment to faculty development, research and scholarship and national and regional service. Faculty workload obligations must be commensurate with the institution's expectations for promotion, tenure and other programme obligations (Teacher Education Accreditation Council, 2003).

Student support services available to candidates in the programme must be, at a minimum, equal to the level of support services provided by the institution as a whole. Complaints about the programme's quality must be proportionally no greater or significant than the complaints made by candidates in the institution's other programmes (Teacher Education Accreditation Council, 2003).

Student development is not just present in the student affair aspect or student services on campus in terms of curriculum (Mavis, C. Y., 2011). The former President of Harvard, advocates the holistic student development for rapidly changing environment. He criticizes that the nodes which are student abilities of communication, critical thinking, inner development, citizenship for democracy, cultural diversity tolerance, broader interest development, preparation for career and global society are often neglected in the existing undergraduate curriculum (Bok, D., 2006).

Sample

Bharathiar University is the only University in the State during the study period, which has closely interacted with an IT major and brought out a three year Under Graduate curriculum with a focus on BPO/BPS jobs. Hence the curriculum designed by the University and four autonomous Colleges those who introduced the course were selected for the study. There was no sampling technique used because the first batch all final year students of B.Com BPS and BBA BPM (N=150) were taken for the study. All the teachers handling industry institute curriculum from four colleges were contacted for data collection to identify their contribution in inculcation.

Tools

Separate structured questionnaires were designed for students to elicit information on the following

1) Demographic information

2) Perception of students about the programme, content and outcome along with questions to test the general competence and competence in domain.

The questionnaire and test question papers were pre-tested and validated before conduct of test. One hour was allotted for students to complete general aptitude test. The researcher was the only evaluator, who has assessed the answer papers. Two hours were allotted to complete the core subject test. It was descriptive test and valuated based on the answer key.

A structured questionnaire for the faculty members was designed to identify the perception and contribution of faculty members towards industry centric curriculum. A case study method was adopted to identify the support of industries involved in preparation of industry institute curriculum.

Results

Effectiveness of the industry centric curriculum was statistically measured by using Structural Equation Model (SEM). Infrastructure facility and course design, support of faculty, industry contribution and students competence were used to measure the outcome of industry centric curriculum.

Result of Default Model

- Minimum was achieved

- Chi-square:181.437
- Probability level: 0.000
- S/NS : S (S-Significant at 1% level)

It is clear that, if the appropriate distributional assumptions are met and if the specified model is correct, then the value 181.437 is the approximate probability of getting a chi-square statistic as large as the chi-square statistic obtained from the current set of data. For example, if 0.000 is 0.05 or less, the departure of the data from the model is significant at the 0.05 level.

Table 1: Variables in the Structural Equation Model Analysis

Variables		Estimate	S.E.	C.R.	P
Students Outcome (Placement Achievement)	Infrastructure facility and course design	3.947	0.058	67.871	***
	Support of Faculty	3.807	0.065	58.888	***
	Industry contribution	3.847	0.063	60.796	***
	Students competence	3.873	0.059	65.318	***

Source: Primary data, SE: Standard Error, CR: Correlation co-efficient

Table 2: Co-Variables in the Structural Equation Model Analysis

S.No.	Variables			Estimate	S.E.	C.R.	P
1	Infrastructure facility and Course Design	<-->	Students Competence	-0.057	0.046	-1.235	0.217
2	Support of Faculty	<-->	Students Competence	0.049	0.047	1.04	0.298
3	Industry Contribution	<-->	Students Competence	0.144	0.051	2.801	***
4	Support of Faculty	<-->	Industry Contribution	0.094	0.046	2.022	***
5	Infrastructure facility and Course Design	<-->	Industry Contribution	-0.002	0.045	-0.034	0.973
6	Infrastructure facility and Course Design	<-->	Support Of Faculty	0.16	0.044	3.628	***

From Table-2, the coefficient of Infrastructure facility and Course Design is -0.057 represents the partial effect of Infrastructure facility and Course Design on Students Competence, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Students Competence would decrease by -0.057 for every unit decrease in Infrastructure facility and Course Design. And this coefficient value is not significant at 5% level. The coefficient of Support of Faculty is 0.049 represents the partial effect of Support of Faculty on Students Competence, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Students Competence would increase by 0.049 for every unit increase in Support of Faculty and this coefficient value is not significant at 5% level. From the table II, the coefficient of Industry Contribution is 0.144 represents the partial effect of Industry Contribution on Students Competence, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Students Competence would increase by 0.144 for every unit increase in Industry Contribution and this coefficient value is significant at 5% level. The coefficient of Support of Faculty is 0.094 represents the partial effect of Support of Faculty on Industry Contribution, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Industry Contribution would increase by 0.094 for every unit increase in Support of Faculty and this coefficient value is significant at 5% level. The coefficient of Infrastructure facility and Course Design is -0.002 represents the partial effect of Infrastructure facility and Course Design on Industry Contribution, holding the other variables as constant. The estimated positive sign implies that such effect is positive that

Industry Contribution would decrease by -0.002 for every unit decrease in Infrastructure facility and Course Design and this coefficient value is significant at 5% level. The coefficient of Infrastructure facility and Course Design is 0.16 represents the partial effect of Infrastructure facility and Course Design on Support of Faculty, holding the other variables as constant. The estimated positive sign implies that such effect is positive that Support of Faculty would increase by 0.16 for every unit increase in Infrastructure facility and Course Design and this coefficient value is significant at 5% level.

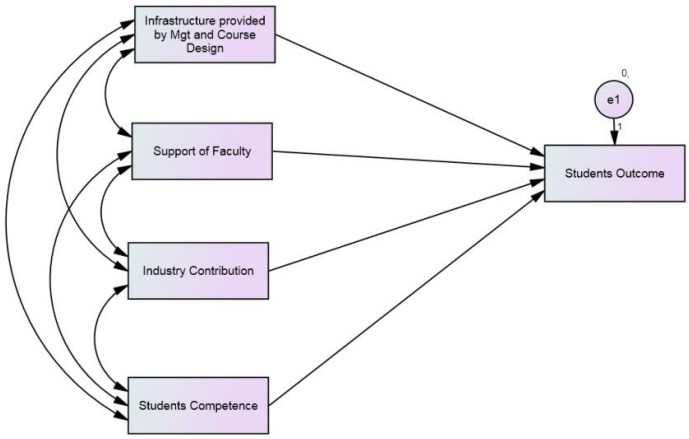

Figure 1: Structural Equation Model of Infrastructure Facility and Course Design, Support of Faculty, Industry Contribution, Student's Competence and Student's Outcome

Table 3: Model Fit Summary

Variable	Value	Suggested value
Chi-square value	181.437	---
Chi-square/P-value	0.000	< 5 per cent (Hair et al., 1998)
GFI	0.937	>0.90 (Hu and Bentler, 1999)
AGFI	0.903	>0.90 (Hair et al. 2006)
CFI	0.911	> 0.90 (Daire et al., 2008)
RMR	0.004	< 0.08 (Hair et al. 2006)
RMSEA	0.001	< 0.08 (Hair et al. 2006)

Table-3 shows that the Chi-square degrees of freedom value is 0.000 which is less than 0.05 which indicates perfectly fit. Here GFI (Goodness of Fit Index) value and AGFI (Adjusted Goodness of Fit Index) value is greater than 0.9 which represent it is a good fit. The calculated CFI (Comparative Fit Index) value is 0.911 which means that it is a perfectly fit and also it is found that RMR (Root Mean Square Residuals) value is 0.004 and RMSEA (Root Mean Square Error of Approximation) value is 0.001 which is less than 0.10 which indicated it is perfectly fit. Hence null hypothesis is accepted and conclude that the model is good fit and it is true that all the mentioned factors should be presented to get the expected outcome.

CONCLUSION

The proposed model called Competence - Contribution - Support (CCS) has good fit to assess the effectiveness of the selected Industry Centric Curriculum. Based on the results obtained from structural Equation Model for the present study to assess the effectiveness of industry centric curriculum B.Com BPS/BBA BPM, it is concluded that the four important factors that contribute towards the effectiveness of educational innovation are:

- Infrastructure facility and course design

- Support of faculty
- Industry Contribution
- Students competence

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