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Faculty Members' and Students' Perceptions on Competency-based Education: A Case in Tourism Higher Education

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Abstract. While vocational higher institutions are claimed to have failed to link with the industry needs, competency-based education (CBE) is expected to provide a solution for enhancing graduates' competency. Despite its crucial role, studies on this area remains scarce. Thus, this study aims to investigate faculty members' and students' perspectives on the adoption of CBE in higher tourism institutions. To this end, 150 students and 10 faculty members were surveyed and interviewed. The quantitative data are analyzed with JASP for statistic descriptive, while the qualitative data are analyzed thematically. The results showed the implementation of CBE from two different perspectives. Both faculty members and students view the adoption of CBE as to meet their expectation. The investigation also reveals some implication for curriculum improvement, which aligns with the industry needs. The findings are expected to have theoretical, practical, and policy contribution on related stakeholders.

INTRODUCTION

CBE models of education were first adopted with students to demonstrate mastery of skill sets for agriculture when the Morrill (Lands)-Act of 1862 was implemented [1]. The nature of CBT was first understood as the acquisition of skills, facts, and knowledge through specific study..., and the application of that knowledge comes in the realms of experiences [2]. Additionally, CBE serves as a learning approach that focuses on learning outcomes rather than learning processes. It provides learning objectives in terms of competences and explicitly identifies them. Such clear-cut goals demand a proper approach that produces demonstrable outcomes [3]. Since then, CBE has been widely implemented in professional education [4]–[6]. CBE later evolved into other general and vocational education curriculum and training [7]. Also known as outcome-based education (OBE) [8], [9], CBE is believed to be the panacea on the world criticism on the low competency of graduates due to its competitive advantages.

A growing body of literature acknowledges the advantages of CBE on education. While the conventional education relied heavily on time frame and the predetermined sessions, CBEs are adaptable, do not follow a prescribed curriculum, and provide a best practice environment for individuals to learn what they need to learn [1]. In this view, students are not hurried to acquire the material or keep up with their cohort in competency-based learning [10]. Students must do more than memorize the content during a specific assessment period; they can only proceed when they demonstrate mastery of the skills and demonstrate independence [11]. On the same wave, testing students' existing knowledge and abilities is another technique to assess proficiency in a CBE program. In this way, programs can provide students with opportunities to earn credit based on the knowledge they bring to the program [12], [13]. CBE was also found to be beneficial in other studies. Summative and formative assessments, for example, should be used to monitor instruction. Students who fall short of program standards [14] must improve their performance. Sturgis argue that CBE is equitable and nondiscriminatory, respect for ethnic origins, internal gender identity, and gender expression [15].

Furthermore, CBE provides a culturally sensitive education. Personal development occurs unprejudiced instilling higher order thinking talents in children from varied backgrounds enables them to experiment with new ideas and solve difficulties. Eventually, it recognizes students' abilities and empower them to choose their study plan, thus fostering effective faculty-student dialogue since students are the priority [15].

The primary issue with vocational education in Indonesia is a misalignment between the curriculum of vocational schools and the competencies required by industry. One of the education sector's challenges, quality, relevance, and access, is the mismatch between workforce supply and demand [16]. The adoption of CBE and the absence of CBA may be the cause, and criterion-based assessment is being implemented further. As a result, the CBE has been characterized as a curriculum and syllabus creation process since 2014 [17][18][19]. Similarly, CBE adoption is followed by formative assessment [20]. The assessment is criterion-based to demonstrate student compliance with all unit competencies for further evaluation [21].

Most THE students go through several semesters of theory and practicum, and sit for summative assessments at the end of the semester, which are thought to impact students' learning; however, [22][23]. Moss (2013) claimed that the accuracy of summative evaluations is determined by the quality of the assessments and the assessors' competence. While the efficacy of summative assessment varies by class, the seamless integration of formative and summative assessment appears to be hampered by a critical technical barrier [23]. At this point, students at THE are required to complete an internship, which aids in developing job knowledge and abilities and can pave the way for future professional opportunities [24]. The primary question is how strong the relationship between teaching, learning, and performance outcomes is [25]. CBE and CBA have been used in tourism vocational schools since 2009 [26], to acquire knowledge, skills, attitudes, and experience through prescribed standards and an assessment process Vargas, 2002 in [29]. When implementing CBE, facilities, tools, equipment, and facilitators all play important roles. Despite the global adoption of CBE in the education world, not many research investigate CBE in TVHEs taken from different angles: faculty members and students especially taking the tourism education in Indonesia. To fill this void, this study aims to expore faculty members' and students' perception of CBE in TVHEs.

THE CASE OF TOURISM HIGHER EDUCATION

CBE in THE is associated with improving graduate quality for better employability. Thus, employability skills, attitudes and traits should be included into the curriculum [27]. Finally, quality competencies and skills help to perform efficiently and improve destination competitiveness [28]. To this end, much study explored the tourism higher graduates competency from the industry perspectives [27]–[29]. However, there is a need to call for THE perspectives on CBE implementation, both from teachers and students. To fill such necessities, the researchers conducted a case study in one of private TVHEs in Jakarta which offers various education level from undergraduate, graduate, and post-graduate degree in tourism. As for undergraduate degree, the college offers diploma IV in hotel management, and travel business, in addition students can also study in S1 tourism and hospitality industry. CBE is implemented and assessed in this college with summative and formative assessment. Additionally, before going into internship recruitments, students have to undergo competency-based assessment (CBA) conducted by professional certification body. The certification is one of the colleges' efforts to provide its graduates with all the necessary competencies in the industry, thus improving their competitiveness.

METHODOLOGY

In the spirit of pragmatism, this study addresses the research issues through quantitative and qualitative data [21]. The data collection process included a survey and semi-structured interviews aided with self-administered interview lists. A case study is employed to describe the specific unit of analysis [30]. The population consists of third year students from one tourism higher institution in Jakarta who have participated in competency assessments and industrial internships. Students who did not match the database's inclusion requirements were excluded. With the assistance of faculty members, an online questionnaire was delivered to the target population. Students were previously informed about the study's objectives and ethical concerns, such as anonymous voluntary participation. Thus the participants' selection is by convenient sampling. After one month, 150 students completed the form, representing 46.8 percent of the total population (320 students), and five students were interviewed for further information. Identical procedures were carried out for faculty members who taught vocational skills. Ten faculty members completed surveys, and three indicated an interest in being interviewed. The number of sample is considered appropriate [31].

The instrument is divided into two (2) sections: (1) demographic data and (2) competency-based education. To enhance comprehension, the instruments were derived from various sources and translated into Bahasa Indonesia. Before the instruments were delivered to teachers and students, they continued piloting for twenty students for semantic adjustments. The translators' colleagues examine the translations for substance and linguistic accuracy. Frequently, the feedbacks are used to improve the manuscript's internal consistency. The following table contains the survey instrument with five (5) Likert scale, with 1 shows strongly disagree and 5 showing strongly agree. The mean score range is adopted for analyses, the mean range of 1.00-1.80 strongly disagree, 1.81-2.60 disagree, 2.61-3.40 neutral, 3.41-4.20 agree, and 4.21-5.00 strongly agree.

TABLE 1. Survey instruments for students and teachers

Parts	Topic	Sources
Part 1	Demographic data	[32], [33]
Part 2	Competency-based education (CBE)	[17], [18], [20], [26], [34], [35]

FINDINGS AND DISCUSSIONS

The study aims to investigate the implementation of CBE viewed from the students and faculty members. The multi-stakeholders perspectives are expected to provide a more thorough description of CBE adoption, especially in the case of a higher tourism institution. Given such understanding, the research findings can contributes to the growing body of knowledge on vocational education. Related stakeholders can use the findings for program development and improvement of vocational students graduates competency that match the industry needs.

Demographic data

The participants of this research comprise two cohorts: students and faculty members. from demographic data of the students, it was found that female participants are 58%, while the male participants are 42%. their age ranges from 19 to 28 years. the majority of the participants graduated from senior high school (71%), and vocational school (29%). additionally, participants reported hotel to be their internship sites (76%), followed by restaurant and café (5%), travel agents (8%), and other hospitality and tourism industry sites (11%). dealing with the number of competency certificates, the majority had one (1) certificate (104 participants), and the rest had various certificates. additionally, ten faculty members participated in the study; seven females, and three males. the ages range from 34 to 57, and their teaching experience range from five to fifteen years. before their professional teaching, they have various professional experience in hotel, restaurant, café, travel agents, and other hospitality industries from six months to 15 years. all of them have competency certificates. thematic analysis was used to examine qualitative data, while statistic descriptive analysis was used to examine quantitative data.

Students' perceptions on competency-based education

The quantitative data from the survey was analyzed for statistic descriptive with JASP. The results in Table 2. uncovered the students' perspective on CBE in their institution. The CBE instrument comprised nine (9) items from the adapted sources. The instrument covers several aspects of CBE such as (1) curriculum, (2) teaching facilities, (3) teachers' competency, and (4) internship. In general, students reported their strong agreement in eight (8) items, and agreement on one (1) item. The mean score ranges from 4.127 to 4.393. The lowest agreement was on item 6 stating the efficiency of the module content and the highest agreement was on item 9; the internship sites. It is also interesting that students strongly agree that they have competent faculty members (M=4.353). In addition to the internship sites and faculty members' competency, students perceived that the practicum lab was appropriate for the vocational learning (M=4.307). Strong agreement was also seen in the equipment and ingredients for practicum, modules and manuals, and last but not least, students consider that their campus curriculum was in line with the industry needs.

TABLE 2. Students' Perspective on CBE

NO	ITEM	MEAN	SD	MIN	MAX
1	Campus curriculum matches the industry needs	4.220	0.826	1.000	5.000
2	The practicum lab is appropriate	4.307	0.777	1.000	5.000
3	The equipment and ingredients for practicum is appropriate	4.220	0.834	1.000	5.000
4	The faculty members are competent	4.353	0.706	1.000	5.000
5	Modules and practicum manuals are appropriate	4.220	0.713	1.000	5.000
6	The module content are effective and efficient	4.127	0.780	2.000	5.000
7	The practicum sessions are appropriate	4.207	0.854	1.000	5.000
8	Planning and internship arrangement are appropriate	4.220	0.919	1.000	5.000
9	Internship sites meets my interests & expertise	4.393	0.835	1.000	5.000

Students viewed CBE implementation positively, as seen by their strong approval of the items. However, the lowest mean score for item 6 should be taken seriously. The module is vital to the teaching-learning process since it includes all skills that students must master. Creating an effective module is time-consuming. CBE programs at TVHE must be developed in collaboration with industry partners. The faculty worked with an instructional designer and industry subject-matter experts on a curriculum development process for occupational analysis. The competencies for each course were identified by panels, who then organized them into modules and identified or created materials for each module. Faculty evaluated their assessments by external experts and reviewed by an employer panel after creating them and associating them with competencies [38]. Furthermore, the module should be scrutinized and evaluated regularly based on industry feedback. The interview session revealed what skills and competencies were not taught on campus but were already used in the industry. Because students have already had overseas and domestic industrial training, they can provide some analysis and feedback on the campus curriculum content as revealed by interview excerpts from student participants (SP).

- *Currently, it is not possible to learn how to use the same software as those in the industry, such as Virtual Hotel Program (VHP). I hope that this will be possible to do in the future.* (Author's translation from SP1)
- *When I did my internship, I needed some time to get to know the hotel system. Based on my understanding, the campus learning with the office system is outdated, since we rarely use Excel-based system in our internships.* (Author's translation from SP3)

Based on the interview data, it can be inferred that technology adoption in campus curriculum is lacking. While the industry starts to use the latest technology in the form of integrated system from front office and back office with VHP, students in TVHE campus still struggle with MS. Excel formula which is not easy to discern. It is evident that the disruptive technologies causing rapid changes in the workplace, thus TVHEs providers are encouraged to incorporate more digital technology into their courses. Eventually, technological advancements in VE education is becoming more critical [36]. Instead of technology integration, the interviews also reveal demand of soft skill urgently required by the industry, such as public speaking, problem-solving, critical situation management, and upselling. Students also reported several skills needed in the industry, yet they were not trained in campus, such as wine expert, fruit carving, chocolatier, and wine pairing. The findings serve as valuable inputs for curriculum developers to better suit the industry needs.

Faculty members' perceptions on competency-based education

In table 3, the finding reported that the overall faculty members' perceptions are slightly higher than the students' responses. The mean score ranges from 4.1 to 4.4. Although the overall score is higher than the students', the lowest mean score is the same (item 6). The effectiveness of the module content is being questioned with the lowest mean (M=4.1). In addition, the faculty members show strong agreement on eight (8) items and lower agreement on one (1) item, that is item 6. The strongest agreement lies on the campus-industry curriculum matches (item 1), the appropriateness of practicum lab (item 2), and the competent teachers (item 4).

TABLE 3. Faculty Members' Perspective on CBE

NO	ITEM	MEAN	SD	MIN	MAX
1	Campus curriculum matches the industry needs	4.400	0.516	4.000	5.000
2	The practicum lab is appropriate	4.400	0.516	4.000	5.000
3	The equipment and ingredients for practicum is appropriate	4.300	0.483	4.000	5.000
4	The faculty members are competent	4.400	0.516	4.000	5.000
5	Modules and practicum guides are appropriate	4.200	0.632	3.000	5.000
6	The module content are effective and efficient	4.100	0.568	3.000	5.000
7	The practicum sessions are appropriate	4.300	0.483	4.000	5.000
8	Planning and internship arrangement are appropriate	4.300	0.823	3.000	5.000
9	Internship sites meets students' interests & expertise	4.200	0.789	3.000	5.000

During the interview sessions, the competence of the faculty members was investigated. They must keep up with industry demands as vocational educators. They reported several activities organized on a regular basis by the campus to get recent feedback from the industry. Industry visits, lecturer internships, dialogue with industry players, and FGD curriculum development with industry are just a few of the activities. Aside from institutional professional development, the faculty member participants revealed that they maintain a close relationship with industry practitioners to observe, communicate with, and receive the most up-to-date information from the industry players. Attending webinars and events hosted by industry associations is also done to keep up with what's going on in the industry. When asked about industry-specific skills that aren't covered in school, they mentioned towel art, public speaking, ticketing, and butlering. When asked about the teaching material that differs from that used in the industry, the teacher-participant (TP) stated:

- *We are aware that some system used in campus is no longer used in the industry, some students keep asking about this, so we hope we can upgrade our system soon.* (Author's translation from TP3)
- *I think we have to equip the students with knowledge and skill about Gueridon and bar service.* (Author's translation from TP1)
- *In laundry, I think the equipment and chemicals are different from the industry.* (Author's translation from TP2)

The interview results show how the faculty members performed their professional development both institution and non-institution. Though their expertise was partly constructed with the professional and academic background, they still maintain close communication with the industry to update the industry needs. This is why both students and faculty members considers positively about their competency. In general, teachers' approval on CBE is better than students'. However, both teachers and students positively perceived the adoption of CBE, seen from the nine items mean score. It means that the enactment of CBE in the research site has met the stakeholders' expectation.

CONCLUSION

This study may contribute to developing a new paradigm for utilizing competency development in tourism vocational higher education (TVHE) to improve workplace performance standards, which has historically conflicted with traditional learning processes. The findings of this study will be beneficial because they will serve as a

springboard for future research on the actual teaching-learning process in television higher education. Indonesia's NQF is a critical tool for developing graduates' competencies should also be extensively investigated. As a result, to maintain and improve the quality of instruction, skill updates should also be proactive in keeping up with current tourism industry practices [37]. This is necessary to avoid controversy regarding the traditional program's stance on CBE.

This study is not without limitations. First, the study was conducted in a short period, which influenced the sample size of participants and the extent of follow-up interviews. Thus, the finding cannot be generalized to the wider context. Second, since the questionnaire was distributed in the classroom WhatApps Groups, which may results in participants' bias such as bandwagon effect. To cater this bias, follow-up interviews were conducted to clarify the quantitative findings. Despite the limitation, this study adds on empirical findings on CBE implementation in TVHEs. In the long run, related policy-makers can use the results as evidence for curriculum development in related areas, and it can be adopted as feedback for policy improvement. Last but not least, this study needs to be thoroughly investigated with adding more variables and state-to-the-art data analysis both qualitatively or quantitatively.

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REFERENCES

1. M. K. Brammer and K. M. Goodrich, "Competency-based education model: is it appropriate for counselor education?," *Soc. Sci. J.*, vol. 00, no. 00, pp. 1–12, 2021, doi: 10.1080/03623319.2021.1883380.
2. L. Green, "What is Competency-Based Education?," *J. Heal. Phys. Educ. Recreat.*, vol. 44, no. 8, pp. 87–88, 1973, doi: 10.1080/00221473.1973.10610860.
3. J. Weinstein and R. Houston, "Competency based education," *J. Jewish Educ.*, vol. 43, no. 3, pp. 21–26, 1974, doi: 10.1080/0021642740430306.
4. A. Q. Staton-Soicer and R. E. Bassett, "A mastery learning approach to competencybased education for public speaking instruction," *Commun. Educ.*, vol. 29, no. 2, pp. 171–182, 1980, doi: 10.1080/03634528009378408.
5. N. Malakooti, "Assessment of the midwifery students' clinical competency before internship program in the field based on the objective structured clinical examination," *Iran. J. Nurs. Midwifery Res.*, vol. 23, no. 1, pp. 31–35, 2018, doi: 10.4103/ijnmr.IJNMR_181_16.
6. M. H. Morris, "A competency-based perspective on entrepreneurship education: Conceptual and empirical insights," *J. Small Bus. Manag.*, vol. 51, no. 3, pp. 352–369, 2013, doi: 10.1111/jsbm.12023.
7. L. T. Tran and C. Nyland, "Competency-based training, global skills mobility and the teaching of international students in vocational education and training," *J. Vocat. Educ. Train.*, vol. 65, no. 1, pp. 143–157, 2013, doi: 10.1080/13636820.2012.755215.
8. W. Spady, "Competency Based Education: Organizational Issues and Implications," *Educ. Res.*, vol. 6, no. 2, pp. 9–15, 1977, doi: 10.3102/0013189X006002009.
9. W. Spady, "Competency Based Education: A Bandwagon in Search of a Definition," *Educ. Res.*, vol. 6, no. 1, pp. 9–14, 1977, doi: 10.3102/0013189X006001009.
10. S. Mehall, "How online competency-based education can enable greater access to higher education," *J. Competency-Based Educ.*, vol. 4, no. 4, pp. 2–5, 2019, doi: 10.1002/cbe2.1201.
11. O. Bernikova, "Competency-based education: From theory to practice," in *IMCIC 2017 - 8th International Multi-Conference on Complexity, Informatics and Cybernetics, Proceedings (Vol. 2017-March,). International Institute of Informatics and Systemics.*, 2017, pp. 316–319.
12. J. Gervais, "The operational definition of competency-based education," *J. Competency-Based Educ.*, vol. 1, no. 2, pp. 98–106, 2016, doi: 10.1002/cbe2.1011.
13. L. Glowa and J. Goodell, *Student-centered learning : Functional requirements for integrated systems to optimize learning student-centered learning*. Vienna: International Association for K-12 Online Learning (iNACOL),

2016.

14. J. Bernard and R. . Goodyear, *Fundamentals of clinical supervision*, 6th edn. Pearson Education, Inc., 2019.

15. C. Sturgis, "Chugach School District: Personalized, Performance-Based System," *iNACOL*, 2016, [Online]. Available: http://www.inacol.org/resource/chugach-school-district-a-personalized-performance-based-system/.

16. N. I. A. Larocque, "Summary of Indonesia'S education sector assessment," Manila, 05, 2015.

17. P. C. Acquah, E. B. Frimpong, and J. K. Borkloe, "The competency based training (CBT) concept of teaching and learning in the technical universities in Ghana: challenges and the way forward," *Asia Pacific J. Contemp. Educ. Commun. Technol.*, vol. 3, no. 2, 2017, doi: 10.25275/apjcectv3i2edu14.

18. L. R. Dopson and R. F. Tas, "A practical approach to curriculum development: A case study," *J. Hosp. Tour. Educ.*, vol. 16, no. 1, pp. 39–46, 2004, doi: 10.1080/10963758.2004.10696783.

19. H. Vargas, "Automated assessment and monitoring support for competency-based courses," *IEEE Access*, vol. 7, pp. 41043–41051, 2019, doi: 10.1109/ACCESS.2019.2908160.

20. D.-G. Tremblay and I. Le Bot, "The German dual apprenticeship system: an analysis of its evolution and present challenges," Canada, 2002. [Online]. Available: https://files.eric.ed.gov/fulltext/ED357698.pdf.

21. L. M. Spencer and P. S. M. Spencer, *Competence at work models for superior performance.* John Wiley & Sons., 2008.

22. C. M. Moss, "Research on classroom summative assessment," *SAGE Handb. Res. Classr. Assess.*, pp. 235–256, 2013, doi: 10.4135/9781452218649.n14.

23. J. W. Looney, "Integrating Formative and Summative Assessment: Progress Toward a Seamless System?," (2011) *OECD Educ. Work. Pap.*, no. 58, pp. 1–64, 2011.

24. K. N. Smith and D. K. Green, "Employer internship recruiting on college campuses: 'the right pipeline for our funnel,'" *J. Educ. Work*, vol. 34, no. 4, pp. 572–589, 2021, doi: 10.1080/13639080.2021.1943333.

25. G. Norman, "Editorial - Outcomes, objectives, and the seductive appeal of simple solutions," *Adv. Heal. Sci. Educ.*, vol. 11, no. 3, pp. 217–220, 2006, doi: 10.1007/s10459-006-0006-3.

26. P. Silitonga, "Competency-based education: a multi-variable study of tourism vocational high school graduates," *J. Teach. Travel Tour.*, vol. 21, no. 1, pp. 72–90, 2021, doi: 10.1080/15313220.2020.1820427.

27. H. F. Lu, "Enhancing university student employability through practical experiential learning in the sport industry: An industry-academia cooperation case from Taiwan," *J. Hosp. Leis. Sport Tour. Educ.*, vol. 28, no. August 2020, p. 100301, 2021, doi: 10.1016/j.jhlste.2021.100301.

28. N. M. Shariff and R. Abd Razak, "Exploring hospitality graduates' competencies in Malaysia for future employability using Delphi method: a study of Competency-Based Education," *J. Teach. Travel Tour.*, vol. 00, no. 00, pp. 1–19, 2021, doi: 10.1080/15313220.2021.1950103.

29. L. Andrades and F. Dimanche, "Destination competitiveness in Russia: tourism professionals' skills and competences," *Int. J. Contemp. Hosp. Manag.*, vol. 31, no. 2, pp. 910–930, 2019, doi: 10.1108/IJCHM-11-2017-0769.

30. R. K.Yin, *Case Study Research: Design and Methods*, Fourth Edi. California: Sage Publication, 2009.

31. J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, Eighth Edn. Cengage, 2018.

32. B. Gillham, *Developing a questionnaire*. A&C Black, 2000.

33. D. Wilkinson and P. Birmingham, *Using research instruments: a guide for researchers*, First Edn. Routledge, 2003.

34. P. Silitonga, *The revolution in national qualification framework implementation (Revolusi Penerapan Kerangka Kualifikasi Nasional)*. Yogyakarta: ANDI, 2015.

35. M. R. Dehaghi and A. Rouhani, "Studying the relationship between the effective factors on employees' performance in Iran's university and the students' satisfaction with regards to employees' performance," *Procedia - Soc. Behav. Sci.*, vol. 141, pp. 903–908, 2014, doi: 10.1016/j.sbspro.2014.05.158.

36. B. Clayton and R. Harris, "Recent reforms in vocational education and training," *Int. J. Train. Res.*, vol. 16, no. 2, pp. 99–102, 2018, doi: 10.1080/14480220.2018.1501913.

37. S. Z. Ahmad, A. R. Abu Bakar, and N. Ahmad, "An evaluation of teaching methods of entrepreneurship in hospitality and tourism programs," *Int. J. Manag. Educ.*, vol. 16, no. 1, pp. 14–25, 2018, doi: 10.1016/j.ijme.2017.11.002.