



Journal of Multidisciplinary and Translational Research (JMTR)

journal homepage: <https://journals.kln.ac.lk/jmtr/>



Incorporating outcome-based teaching/ learning methods into a curriculum

Hasara Dasuni Hirimuthugoda*

¹*Department of Hindi Studies, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka*

Abstract

Recent attempts at curriculum revision and development regarding the teaching of various disciplines, including the teaching of foreign languages, in higher educational institutes tend to use outcome-based educational approaches, considering the need to adopt modern concepts of education that aim at enhancing the productivity of education. For the process of reviewing recent teaching/ learning methods, and especially before designing a curriculum, feedback from learners and teachers is crucial. This research investigated how to incorporate outcome-based teaching/ learning methods into a curriculum of teaching Hindi as a foreign language in a degree curriculum in Sri Lanka. It analyzed the perceptions of graduates, undergraduates, and university teachers about various teaching/ learning methods used in education and examined the feasibility of incorporating outcome-based teaching/ learning methods into a curriculum of teaching Hindi as a foreign language in a university in Sri Lanka. The primary data was collected mainly through a perception survey conducted online. Recent graduates, undergraduates, and university teachers of the Bachelor of Arts Honors degree in Hindi offered by the University of Kelaniya, Sri Lanka were taken for the survey. In addition to the online survey, a semi-structured phone interview with a stakeholder was conducted to get further suggestions. A mixed-method approach was used to analyze data. It was found that the use of an eclectic approach to teaching of a foreign language, particularly the use of technology to support teaching/ learning, the encouragement of autonomy of the learner, while mediating between learner-centered approaches and teacher-centered approaches, and fostering exposure to the foreign language were possible steps that could be taken to incorporate outcome-based teaching/ learning methods into a curriculum of teaching Hindi as a foreign language in a university degree program in Sri Lanka.

Keywords: Hindi as a Foreign Language, Learner autonomy, Outcome-based teaching/ learning methods

Article info

Article history:

Received 30th July 2024

Received in revised form 20th October 2024

Accepted 14th December 2024

Available online 25th December 2024

ISSN (E-Copy): ISSN 3051-5262

ISSN (Hard copy): ISSN 3051-5602

Doi: <https://doi.org/10.4038/jmtr.v9i2.27>

ORCID iD: <https://orcid.org/0000-0002-8418-8295>

*Corresponding author:

E-mail address: hasaradh@kln.ac.lk (H.D. Hirimuthugoda)

© 2024 JMTR, [CC BY-NC-SA](#)

Introduction

A curriculum outlines the content, processes, and resources planned to attain the objectives of education. The outcomes are the most significant in curriculum design and development. The outcome-based approach is a prescriptive curriculum design model concerned with the end results. Contrary to the traditional methods of curriculum planning, it follows a backward approach in which outcomes are identified first and the contents of teaching and learning, and the assessment and evaluation are planned later (Prideaux, 2003, p. 6). The degree curriculum must be planned taking into account the academic and industrial needs. Twelve learning outcomes recommended to attain at the end of a degree program have been introduced by the Ministry of Higher Education in Sri Lanka. Those outcomes are categorized into four core areas, namely, knowledge, skills, attitudes, values, professionalism, and vision for life, and mindset and paradigm (University Grants Commission, 2015). The teaching/ learning methods must be planned in alignment with the Intended Learning Outcomes of each course unit.

Education of Hindi as a foreign language takes place in many countries with the coordination of local institutions, Indian authorities, and organizations like the World Hindi Secretariat. In Sri Lanka, it is generally believed that most Sri Lankans are familiar with at least a few Hindi words because of Hindi movies, music, art, and other socio-cultural relations that lasted centuries with neighboring India. When considering language education, teaching and learning Hindi as a foreign language at the institutional level has been practiced for decades in Sri Lanka. In addition to India-funded centers for learning Hindi and North Indian art forms, informal tutoring, private classes, and institutes, Hindi is taught as a foreign language at the school and university levels. Firstly, at the school level, willing students can take Hindi as a subject for their General Certificate of Education (GCE) Ordinary Level and GCE Advanced Level examinations, the latter being the island-wide competitive examination through which admission to almost all government universities is decided. Thus, students can start learning Hindi as a foreign language in Sri Lanka's government education system when they begin grade 10 at the age of 14-15. However, one can start learning the language at even a younger age through private classes, India-funded centers, or informal tutoring.

Formal education of Hindi as a foreign language is practiced at the university level. Four government universities currently conduct degree programs for Hindi, whereas some universities conduct basic proficiency-level courses. University of Kelaniya, Sri Lanka is the leading university to start degree programs for Hindi: the other three universities are the University of Sri Jayewardenepura, the Sabaragamuwa University of Sri Lanka, and the Rajarata University of Sri Lanka. Only the University of Kelaniya has a separate academic department for Hindi studies at the Faculty of Humanities. The Bachelor of Arts Honors Degree program in Hindi, then named the Bachelor of Arts (Special) Degree, was launched in 1982 at the University of Kelaniya (Senevirathne, 2019, p. 17). The average graduate outcome of the degree during the past decade was nine (09) per academic year. The outcome of a Hindi as a Foreign Language degree curriculum must be producing a competent and autonomous graduate who can effectively communicate in Hindi and mediate between languages and cultures.

Outcome-based education (OBE) is an educational system that has gained much attention in higher education worldwide. Accelerating changes and demands have paved the way for outcome-oriented and interactive methods in pedagogy as well. Many educationists and scholars have contributed to OBE; William Spady's models and principles have been well received among them. Spady stated that OBE intends to focus clearly and organize everything in an educational system around what is essential for all the students to succeed at the end of their learning experience (1994, p. 1). The key elements of OBE that have been identified by Spady (1994, p. 8) are graphically presented through his 'OBE pyramid'. He has summarized the process of organizing OBE as defining outcomes, designing curriculum, delivering instruction, documenting results, and determining advancement. In addition, Spady's four organizing principles of OBE, clarity of focus, expanded opportunity, high expectations, and design down are widely considered in studies on OBE (cited in Killen, 2000, pp. 2-4; Lawson & Askill-williams, 2007, p. 6; Ramoroka, 2006, p. 28). Another attempt was made by Davey & Goodwin-Davey (1999) to explain how OBE affects stages of education. First, needs are analyzed. Secondly, inter and intra-organizational arrangements are made. Thirdly, the curriculum is planned accordingly, and courses are designed appropriately. Finally, teaching and learning materials are developed to achieve the outcomes. Hence, OBE has a constructive impact on every stage of educational planning.

OBE differs from traditional educational approaches in several ways. According to Spady (1994, pp.6-7), outcome-based systems build everything on a clearly defined framework of exit outcomes: time is used as an alterable resource, depending on the needs of teachers and students, and standards are clearly defined, known, and 'criterion-based' for all students. OBE focuses on increasing students' learning and ultimate performance abilities to the highest possible levels before they leave the institution. In addition, OBE focuses on students' active participation and performance; it encourages student-centered learning. Akir & Malie (2012, p. 88) stated that the learning process of OBE is student-centered, rather than lecture-based or teacher-centered as in the conventional approaches. On the other hand, it is also suggested that OBE teaching strategies should consist of both teacher-centered and learner-centered approaches. The teacher plays a central role in planning and facilitating student learning in either approach. The teacher decides what methodology should be used depending on the learning outcomes and the nature of the learners (Brown, 2002 cited in Mwanza, 2017, p. 56). Killen (2000, pp. 16-17) identifies the need to plan several different teaching strategies: plans for guided practice sessions during which students can receive feedback on their progress toward the learning outcomes. Further, a variety of tests to provide both the teacher and the students with feedback and a variety of mastery tests at different levels are to be included in an outcome-based degree program. Likewise, resources and teaching techniques to assist students who do not master the required outcomes as quickly as other students are also incorporated.

Language teaching lies in the field of Humanities. Curricula in Arts, Humanities, and Social Sciences have a variation as a result of multiple subdivisions within disciplines and the changing needs of interdisciplinary areas and cultures (Martin, 2009, p. 305). After their research on Indian higher education, Janetius, Mini & Padmanabhan (2017, p. 602) recommended the following factors in their proposed OBE model for Humanities and Social Sciences, :

- a) Student-friendly campus environment
- b) Enrolling student characteristics

- c) Curriculum that focuses on specific skills-based objectives
- d) Teaching-learning process by the qualified engaged employee in a student-centered way
- e) Assessment and evaluation process fitting to measure student transformation

Regarding the teaching-learning process, they suggested that the role of a creative, innovative, and committed teacher who can adopt and apply multimodal teaching strategies to suit the diverse learning styles and cognitive levels of students is crucial for OBE's success.

There are different methods of language teaching and learning including the silent way, suggestopedia, Total Physical Response (TPR), Community Language Learning (CLL), Communicative Language Teaching (CLT), Total Physical Response (TPR), and Task-Based Language Learning (TBLL) (Richards & Rodgers, 1986). Authentic and meaningful communication is emphasized in the CLT method. It links classroom activities with the outside world. A variety of language skills are involved, fluency and accuracy are considered important, and culture is considered an integral part of learning. Furthermore, autonomous learning is motivated by this method (1986, pp. 64-86). Moreover, TBLL or Task Based Language Teaching is focused on the use of authentic language, and it helps to uplift student confidence. Students perform meaningful tasks using the target language.

Assessments of TBLL are primarily based on the outcome of the tasks (Richards, 2013, p. 17). In addition, the eclectic approach encourages a coherent, pluralistic approach to language teaching. It involves various language learning activities that are generally different characteristically (Al Hamash, 1985; Larsen-Freeman, 2000; Mellow, 2000; cited in Mwanza, 2017, p. 56). In the present context, language teaching has become more innovative and advanced with the development of technology. Computer Assisted Language Learning is a method that has emerged in language teaching, and it increases learner autonomy, flexibility, creativity, and basic technical skills. In addition, blended learning, or the combination of various pedagogical approaches and technologies has influenced the current methods of language teaching as well. The flipped classroom method encourages instructional strategies and activities outside the classroom and online. Acquisition and application of knowledge are executed before class, during the class, and after the class in the flipped classroom method.

Analyzing various methods of language teaching, Davey & Goodwin-Davey (1999, p. 21) have recommended the Communicative Language Teaching (CLT) approach with four features: grammatical competence, socio-linguistic competence, discourse competence, and strategic competence to practice OBE in the continuum of language teaching and learning. The importance of technology, integration of four main skills of communication: reading, writing, speaking, and listening and linking classroom and real-world in communication have been discussed under the applicability of the CLT approach for OBE (1999; Richards & Rodgers, 1986, pp. 64-85). Moreover, Griffiths (2009, pp. 74-75) identified Problem-Based Learning (PBL), e-learning, and blended learning especially to benefit teaching and learning with small groups with generally less than twenty students. In addition, Bandey (2019) suggested a few categories of co-curricular activities that can support achieving the Intended Learning Outcomes of a curriculum: kinesthetic, literary, cultural, creative, and social. Likewise, learning activities are recommended to be designed to suit different intelligence like linguistic learners, logical learners, special learners, visual learners, musical learners, interpersonal learners, intrapersonal learners, and naturalist learners (Meena,

2015, p. 6). This can support language learning strategically. Considering current world needs, many teaching approaches promote OBE approaches over content-based approaches, but they do not exclude entirely the content-based approaches.

According to a case study by Ranjani et al. (2014) based in the same institute where this study is based, OBE approaches were practiced using Student-Centered Learning. Their practices and attempts could be considered helpful in identifying possibilities to incorporate OBE into a curriculum that shares a similar context, though the disciplines are largely different. They emphasized that applying theoretical knowledge into practice is a contemporary need of the students. Thus, the attempts of the Faculty of Commerce and Management Studies to promote OBE as separate skills development components are seen within the curriculum: they include embedding skills development inside the subject, focusing on research and analytical skills, monitoring practical training, and evaluating through continuous and final assessments, oral presentations and dissertation. Their focus remained on the student-centered approaches and the importance of enhancing their functional competencies was also emphasized.

OBE, as a contemporary pedagogical approach, tends to place a strong emphasis on fostering Learner Autonomy. Autonomous learning encourages individuals to develop their decision-making capacity and manage their actions independently. Learner autonomy consists of two essential elements: ability and willingness. The ability aspect is contingent on a person's knowledge and skills, while the willingness aspect is rooted in their motivation and confidence (Littlewood, 1996, p. 428). According to Littlewood, Foreign Language learning can contribute to developing autonomy in three key areas: as a communicator, a learner, and a person. Autonomy as a communicator is cultivated through linguistic creativity and effective communication strategies. Autonomy 'as a learner' is nurtured by the capacity to engage in self-directed learning and employ suitable learning strategies both within and outside the classroom. Lastly, autonomy 'as a person' is contingent on individual ability to express personal meanings and create unique learning contexts that resonate with them. Hence, encouraging Learner Autonomy in Foreign Language teaching/ learning is beneficial to meeting the Learning Outcomes of a degree program in a productive way.

Methodology

This research focused on the problem of how to incorporate outcome-based teaching/learning methods into a curriculum of teaching Hindi as a foreign language for undergraduates. This study was mostly based on the philosophy of pragmatism, which emphasizes the importance of research in the practical consequences of findings (Saunders & Tosey, 2013, p. 58). It then utilized a mixed approach, combining quantitative and qualitative methods to gather and analyze data. Graduates, undergraduates, and university teachers of the Bachelor of Arts Honors Degree Program in Hindi of the University of Kelaniya were taken as the sample of the study, which comprised of. 27 graduates, 13 undergraduates, and 4 university teachers who worked as permanent academics engaged in teaching the undergraduates of the Bachelor of Arts Honors Degree Program in Hindi at the University of Kelaniya, Sri Lanka. The perception survey was conducted using Likert scale questions and open-ended questions. In addition, a semi-structured phone interview recorded the perceptions of one stakeholder who represented the industries of tourism and higher education. This interview was conducted to get further insight as the

stakeholder had equal experience in the industry, had worked in several higher education institutes, and had experience teaching and learning foreign languages for the proficiency level needed for the industry.

The study had a cross-sectional time horizon, which means data was collected during the first half of 2020 from participants representing different target population segments. Collected data through the survey was visualized and analyzed using Microsoft Excel and Elasticsearch. Qualitative data was analyzed using the conventional approach to Qualitative Content Analysis (Hsieh & Shannon, 2005). Codes were identified from the gathered information when analyzing the data. Similarities and patterns in study participants' comments were identified freely through this method without being limited to preconceived categories. This inductive research could help assess the applicability of various outcome-based teaching/ learning methods that can be used to develop a Hindi as a Foreign Language degree curriculum in Sri Lanka.

Results and discussion

Firstly, in the perception survey, the graduates were asked to rate the effectiveness of the certain teaching/ learning methods to enhance the competence of an undergraduate who follows the Bachelor of Arts Honors Degree in Hindi (Figure 1).

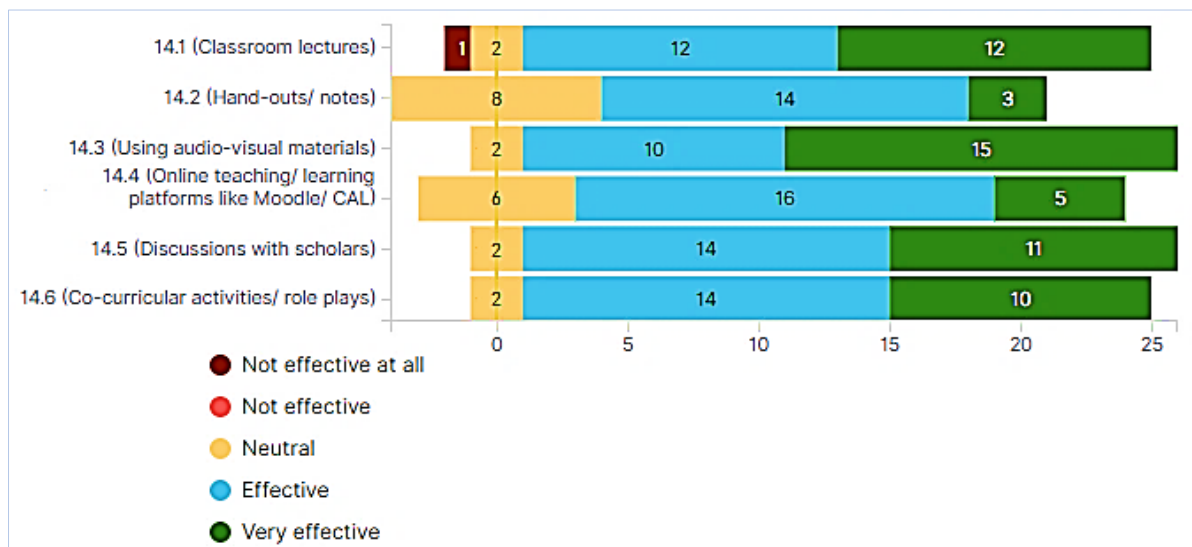


Figure 1. Effectiveness of teaching/ learning methods on competence- Graduates' perceptions

According to Figure 1, it was evident that most graduates believed that classroom lectures are effective in enhancing the competence of graduates. Yet only one graduate believed classroom lectures were not effective. All the graduates were at least neutral or positive towards the other methods. Among them, the method of providing notes, and the method of online teaching received the lowest responses for the 'very effective' category.

Secondly, the undergraduates were asked about their motivation towards the teaching/ learning methods indicated in Figure 2. It was assumed that the undergraduates may be unable to rate the success of teaching/ learning methods in enhancing their competence as they were still undergoing various teaching/ learning methods and yet to see success or failure. Therefore, to make the responses reliable, they were asked about motivation.

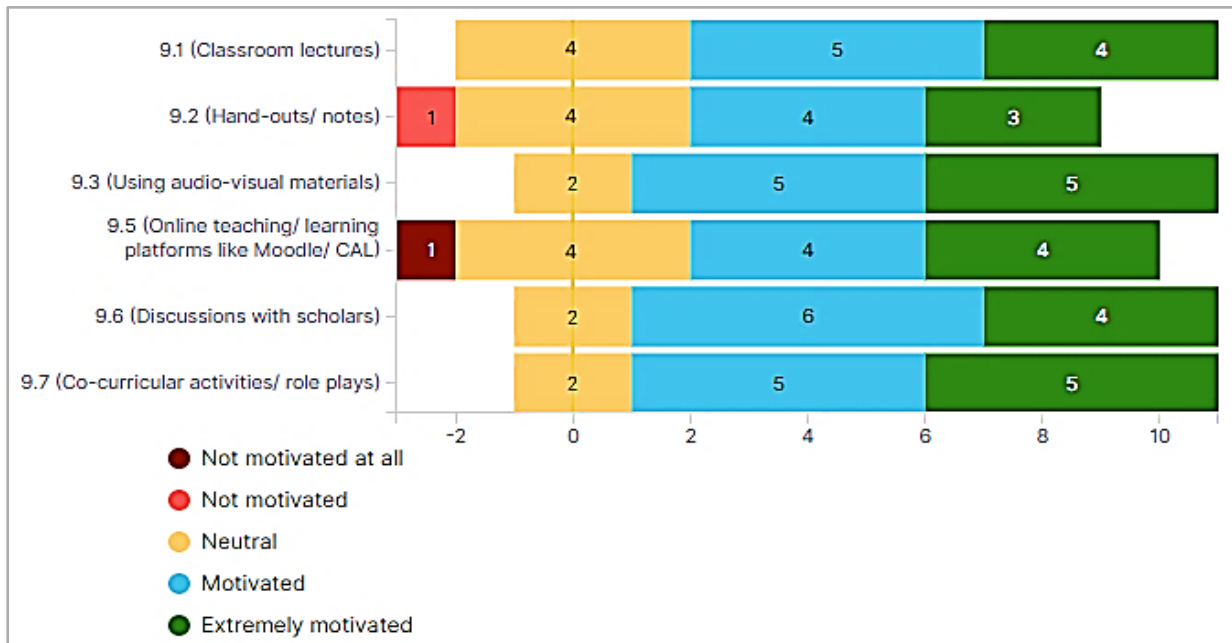


Figure 2. Motivation towards teaching/ learning methods- Undergraduates' perceptions

Figure 2 indicates that some undergraduates were not motivated by providing them with notes and online teaching, yet others were at least neutral about those methods. All undergraduates are neutral or motivated with classroom lectures, audio-video materials, discussions with scholars, and co-curricular activities. They implied that diverse teaching methods will improve students' motivation. It could be argued that teaching/ learning methods that improve the willingness of learners to engage in their studies regularly can effectively contribute to developing their competence.

Thirdly, the university teachers were asked to rate the effectiveness of the same teaching/ learning methods in enhancing the competence of an undergraduate of the Bachelor of Arts Honors Degree in Hindi (Figure 3)

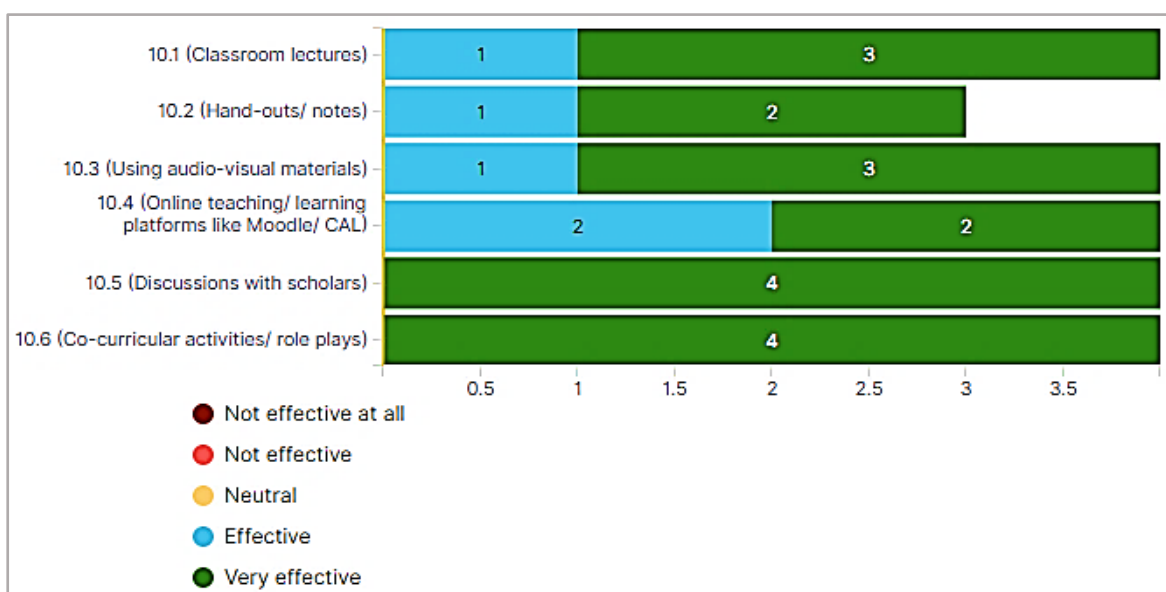


Figure 3. Effectiveness of teaching/ learning methods on competence- University teachers' perceptions

All the university teachers who responded to the survey believed that all these methods effectively enhance the competence of graduates. However, when compared to other methods, online teaching has recorded a low rate. Discussions with scholars and co-curricular activities were the two methods that were best rated implying that all university teachers are confident that those methods are very effective in teaching Hindi as a Foreign Language (Figure 3).

Next, the university teachers were asked to rate the applicability of the teaching/learning methods indicated in Figure 4, which could affect the Learner Autonomy. All the university teachers believed that asking students to prepare their own notes after the teacher introduces and explains using the flipped classroom method and choosing flexibly from the recommended content were very important in supporting Learner Autonomy. These responses further implied that learner-centered approaches were rated as more important than teacher-centered approaches, although university teachers were not strongly confident about using only the learner-centered approaches. According to them, appropriately combining the teacher-centered and the learner-centered approaches was helpful in teaching a foreign language. These responses are visualized in Figure 4 given below.

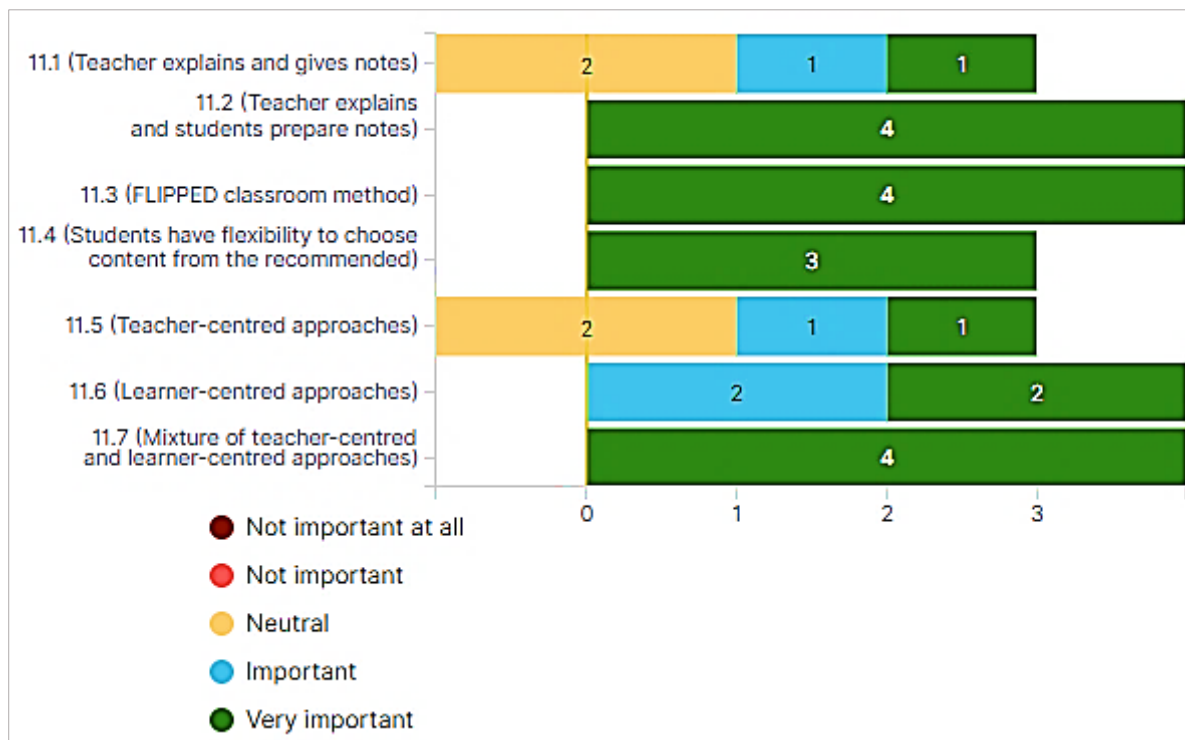


Figure 4. Applicability of teaching/ learning methods in learner autonomy- University teachers' perceptions

In addition to the Likert scale questions, the respondents were asked two open-ended questions to get an in-depth insight. Initially, the graduates were asked to give their suggestions on teaching/ learning methods that should be incorporated into the curriculum to enhance the competence of the undergraduates who follow the Bachelor of Arts Honors Degree in Hindi. Developing communication skills, using technology, learner-centered methods and guest lectures were the codes identified in the analysis. Graduates proposed using teaching/ learning methods to develop practical and communication skills and using technology and the Internet in their studies. Moreover, encouraging students to gain knowledge, adopting learner-centered learning

methods, interacting with native Indian [Hindi] speakers, and inviting guest lecturers who are professionals from outside, were also suggested.

Next, university teachers were asked about their suggestions on what were the teaching/ learning methods that should be incorporated into the curriculum to enhance the competencies of the undergraduates. They recommended the use of updated teaching methods, planning teaching/ learning activities to develop oral communication as well as written communication, and diversity in teaching methods to suit different kinds of learners. Further, they suggested that the learner-centered approaches would be helpful to enhance the competencies of the undergraduates and to encourage Learner Autonomy. One teacher stated that the proportionate use of teacher-centered approaches and learner-centered approaches depends on the subject. Thus, the respondent recommended a mixture of both teacher-centered and learner-centered approaches. That response further implied that giving students the greater weight of learning responsibility of a complex subject would demotivate them. It would make it difficult to achieve the Intended Learning Outcomes.

Apart from the perception survey, the views and suggestions of a stakeholder were recorded through a semi-structured phone interview. According to the interviewee, diversity in teaching methods could effectively engage students with different intellectual capacities in the learning process. Moreover, the interviewee stated, "Teaching and learning must be interactive, practical and active participation of students should be encouraged" (Interviewee 2020, personal communication, 24 July). Next, in explaining the impact and management of guest lectures, the interviewee stated that the effect of guest lectures will have a positive impact only if the resource person is experienced in the relevant subject and has good teaching skills. The interviewee highlighted that a pre-analysis of the performance of the resource person is essential.

Conclusion

Teaching strategies for OBE consist of both teacher-centered approaches and learner-centered approaches. The teacher plays a central role in planning and facilitating student learning in either approach. The outcome of a Hindi as a Foreign Language degree program is a proficient and autonomous graduate capable of communicating fluently in Hindi and bridging languages and cultures. It was evident that graduates, undergraduates, and university teachers prefer student-centered, and motivating teaching/ learning methods over the teacher-centered traditional methods. Nevertheless, the role of the teacher was not ignored. University teachers and stakeholder respondents suggested that teaching/ learning methods should involve students in a practical, motivating, and constructive manner, using both student-centered and teacher-centered approaches appropriately. Moreover, students who are not up to the expected standards could be improved by specially guided exercises and tutorial sessions by the teachers. It could be concluded that planning teaching/ learning methods in an eclectic approach for developing kinesthetic, literary, cultural, creative, and social competencies of learners with different motivation and learning levels is suitable for Foreign Language teaching. It is also pivotal to plan teaching/ learning methods inclusively. It is recommended the use of Information and Communication Technology in Task-Based Language Teaching and classroom activities, and the use of co-curricular activities and role-plays to develop communication, problem-solving, and social skills. In addition to other methods of teaching foreign languages, using audio-video

materials and conducting discussions with native Hindi speakers and scholars could also enhance cultural competence and expose the learners to native patterns of language use. Likewise, conducting guest lectures by scholars and stakeholders from other related disciplines could help improve interdisciplinary competence and prepare the undergraduates to cater to industrial needs after graduation. Simultaneously, teaching/ learning methods that can enhance the ability and willingness of learners contribute to Learner Autonomy, building an autonomous and competent language user. Finally, self-assessments and peer review in teaching and learning are recommended to review the reception and impact of teaching/learning methods from time to time to identify further requirements and improvements.

References

- Akir, O., Howe, T. & Malie, S. (2012). Teaching and learning enhancement through outcome-based education structure and technology e-learning support. *Procedia - Social and Behavioural Sciences*, 62, 87–92. <http://dx.doi.org/10.1016/j.sbspro.2012.09.015>.
- Bandey (2019). Pa:thyakram Ka: Arth, Paribha:sha: E:vam Prakriti. <https://www.scotbuzz.org/2019/05/pathyakram.html> (Accessed: 2 February 2020).
- Davey, C. & Goodwin-Davey, A. (1999). Outcomes-Based Language Teaching and Learning: Negotiating the swamp, *Scrutiny2: Issues in English Studies in Southern Africa*, 4(1), 16–24. <https://doi.org/10.1080/18125441.1999.10877347>.
- Griffiths, S. (2009.) Teaching and Learning in Small Groups. In Fry, H., Ketteridge, S., & Marshall, S. (Eds.), *A Handbook for Teaching and Learning in Higher Education* (3rd ed.). New York: Routledge, 72–84.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis, *Qualitative Health Research*, 15(9), 1277–1288.
- Janetius, S. T., Mini, T. C. & Padmanabhan, R. (2017). Outcome-Based Education for Arts, Humanities and Social Sciences, *Guru Journal of Behavioural and Social Sciences*, 5(1), 601–608.
- Killen, R. (2000). Outcomes-based Education: Principles and possibilities. <https://pdfs.semanticscholar.org/a65e/ff7985df96b13398f9d9a9814a6fad3298a7.pdf>.
- Lawson, M. J. & Askeff-Williams, H. (2007). Outcome-Based Education. In Association of Independent Schools of SA. South Australia.
- Littlewood, W. (1996). "Autonomy": *An Anatomy and a Framework, System*, 24(4), 427–435.
- Martin, P. W. (2009). Key Aspects of Teaching and Learning in Arts, Humanities and Social Sciences. In H. Fry, S. Ketteridge, & S. Marshall (Eds.), *A Handbook for Teaching and Learning* (3rd ed.). New York: Routledge, 300–322.
- Meena, R. L. (2011). Hindi Language Teaching Methodology to Foreigner. https://www.researchgate.net/publication/283268093_Hindi_Language_Teaching_Methodology_to_Foreigner.
- Mwanza, D. S. (2017). The Eclectic Approach to Language Teaching: Its Conceptualisation and Misconceptions, 4(2), 53–67. <https://www.arcjournals.org/pdfs/ijhsse/v4-i2/6.pdf>.
- Prideaux, D. (2003). Curriculum Design. In Cantillon, P., Hutchinson, L., & Wood, D. (Eds.), *ABC of Learning and Teaching in Medicine*. London: BMJ Books, 5–7. <https://cdn.mednet.co.il/2015/09/ABC-of-teaching-in-medicine.pdf>.
- Ramoroka, N. J. (2006). Educators' Understanding of the Premises Underpinning Outcomes-Based Education and its Impact on their Classroom Assessment Practices. University of Pretoria.

- Ranjani, R. P. C., Weligamage, S., Karunaratna, W. V. A. D. & Fernando, P. N. D. (2014). Outcome-Based Education (OBE) using Student Centered Learning (SCL): The Case of Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka, Association of Southeast Asian Institutions of Higher Learning -ASAIHL 2014. Singapore: Association of Southeast Asian Institutions of Higher Learning.
- Richards, J. C. & Rodgers, T. S. (1986). Approaches and Methods In Language Teaching: A description and analysis. Cambridge: Cambridge University Press.
- Richards, J. C. (2013). Backward Design Article Curriculum Approaches in Language Teaching: Forward, Central, and Backward Design, RELC Journal, 44(1), 5–33.
<https://doi.org/10.1177/0033688212473293>.
- Saunders, M. & Tosey, P. (2013). The Layers of Research Design, Winter, 58–59.
- Senevirathne, L. (2019). The Journey of a Dignified Character. In Hirimuthugoda, H. D. & Lansakara, R. N. (Eds.), *Indrabhivandana*. Department of Hindi Studies, University of Kelaniya, 11–20.
- Spady, W. G. (1994). Outcome-Based Education: Critical Issues and Answers. The American Association of School Administrators: Arlington.
<https://files.eric.ed.gov/fulltext/ED380910.pdf>.
- University Grants Commission (2015). Sri Lanka Qualifications Framework. Higher Education for Twenty First Century (HETC) Project of the Ministry of Higher Education: Nugegoda.