Research on the Effectiveness of Outcome-Based Education in the Workplace Communication Curriculum of Undergraduates

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Abstract—**Outcome-Based Education (OBE) is a corrective educational move that has influenced many countries in recent years. Despite the global acceptance of OBE, there is little evidence about its impact on Workplace Communication skills. Thus, the present study aimed to evaluate the effect of OBE on workplace communication competence of Guangdong Ocean University students. The result indicates that the communication skills of the experimental group undergraduates were significantly better than that of the control group students (P=0.097). The OBE approaches can promote the communication ability of undergraduates in Guangdong Ocean University, and the evaluation results can effectively support the continuous improvement of teaching reform. To better serve teaching and improve the quality of graduates, we will further make the design of experimental research better, add some evaluation indicators of student competencies, and expand the sample size.**

Keywords—workplace communication; Outcome-Based Education; encouraging effect

I. Introduction

As graduates must be competent enough to meet the needs of the workplace, preparation for future employment remains an urgent issue. Communication skills are considered "soft science" in the successful future career of a student. The most important quality for a new hire is effective communication skills, which unfortunately is also the least desirable on the list [1]. Adept communication skills are also necessary for entrepreneurs to succeed [2]. The ability to communicate is also a stepping stone for students to participate in society too [3]. Unfortunately, most students do not pay enough attention to their communication skills. Good communication skills often make people quickly competent to work, win bigger space for development. Thus, it is necessary to strengthen the cultivation of undergraduate communication skills.

University curriculum planners believe that workplace communication education is the main part of undergraduate education. Although the course is paid enough attention, there is no empirical study on the effectiveness of course measures in improving communication skills of undergraduates. And previous studies have shown that traditional teaching methods are not attractive to students in the information explosion era [4]. These problems lead to a learner-centered undergraduate communication skills course, which focuses on the learning outcomes of the students rather than the teacher's lectures [5].

Thus, Outcome-based Education (OBE), is an effective means to measure whether the teaching objects of the course have achieved, an important basic work to support the graduation requirements achievement evaluation, and also an important mean to reflect the teaching effects of courses [6]. The core of OBE is to establish reverse instructional design processes based on output orientation, establish training objectives based on future career needs and development expectations of students, and carry out continuous improvement driven by teaching evaluation. At present, there is no in-depth study to explore the availability of OBE in improving communication skills of college students. In fact, it should be explored further in this competitive world.

From 2016 to 2017, the author taught "workplace communication" at Guangdong Ocean University, a mid-sized public university in China. The purpose of this study is to appraise the most efficient empirical evidence to examine the availability of OBE means on the workplace communication curriculum of undergraduates in Guangdong Ocean University.

II. Methodology

A. Subjects

In this study, the population included 595 pre-curriculum undergraduates who were enlisted as the control group who never experienced communication skills training, while the same students when they finished the communication curriculum were enlisted as the experimental group. Teaching outcomes were evaluated by using self-rated questionnaires, which were limited to the "workplace communication" curriculum in the autumn semester in 2017, held by the author at Guangdong Ocean University. The self-rated questionnaires were performed in September (pre-curriculum) and November 2017 (post-curriculum) separately. There are 1190 samples, 595 in pre-curriculum and post-curriculum separately.

B. Study Selection and Quality Appraisal

Collecting 1281 self-test questionnaires and 1190 self-rated questionnaires identified through screening, which completed a

total of 135 questions in the self-rated questionnaires. Thus, a final ensemble of 1190 available self-rated questionnaires was undergone for critical quality assessment.

C. Course assessment

According to the teaching outline of "workplace communication", the examination content is divided into several key knowledge points, and according to the characteristics of the questions, the degree of achievement is divided into different grades. For example, a single score item such as judgment question and the single choice question is divided into two levels of reaching degree: right and wrong. A multiple-choice item is divided into several scoring rates, and the reaching degree level is improved in turn. After the examination, the scores of each key knowledge point corresponding to the questions in the self-rated questionnaires are statistically analyzed. And the degree of achieving the curriculum goals analysis was conducted using combinations of key knowledge points. At the same time, the higher score of the key knowledge points, the higher degree of achievement of them, and then by comparing the highest score of each key knowledge point, judge the overall degree of achievement of the curriculum goals. The detailed analysis method for all databases is available on request.

D. Data analysis

In general, mean standard deviation is used to represent continuous normally distributed variables, and two-tailed Student's test is used to evaluate the differences between the two groups variables. All data analysis procedures were implemented with SPSS (20) software (SPSS Inc., Chicago, IL, USA). The p-value of 0.1 serves as the threshold for significance.

The research question is: Can the actualization of OBE means in curriculum improve communication skills of undergraduates? The paper problem framework is the PICO elements: P (Population) – class undergraduates, I (Intervention) – OBE means, C (Comparison) – pre-curriculum starting and post-curriculum, O (Outcome) – improve communication skills of undergraduates [7].

III. RESULTS

A. Overview of the Study

In this study, two groups of students (pre-curriculum and post-curriculum) participated in the quasi-experimental design (Table 1). Participators in this study were third-year undergraduates registered in workplace communication curriculum at Guangdong Ocean University. All picked participators were third-year students with job demands. The level of maturity and stronger desire to learn, these learners adapted to the outcome-based mean of studying better [8]. All students continued to work until the end of the study. The size of sample was big, 595 participators were enlisted by voluntary and random sampling methods.

TABLE I. CHARACTERISTICS OF THE STUDY FOR ANALYSIS

Research Design	Participators	Intervention		Comparison
		OBE Mean	*Detail*	
2 Group: Pre-Curriculum And Post-Curriculum Experimental Design	595 Undergraduates Enrolled In "Workplace Communication" Curriculum. Experimental Group (Post-Communication) N=595, Control Group (Pre-Communication) N=595	Outcome-Based Communication Skills Education	The Experimental Group Accepted Outcome-Based Communication Skills Training. To Complete 20h Of Communication Skills Education, Including 2 H Of Self-Presentation Exercises. Teaching Tactics Include Online Education, Face-To-Face Lectures, Scenario Simulation, Role-Playing, Group Discussions And Self-Presentation. Each Group Consists Of 10 Students	The Control Group Was Exposed To Pre-Communication. They Never Experienced Communication Skills Training. They Also Had To Complete 2h Of Self-Presentation

This study used the OBE approach combining teaching tactics such as online education, face-to-face lectures, scenario simulation, role-playing, group discussions and self-presentation. Each group consists of of10 students. Using diversified teaching methods, enhance inspiration, and fully mobilize all students to actively participate in learning activities. These can improve the communication skills of undergraduates.

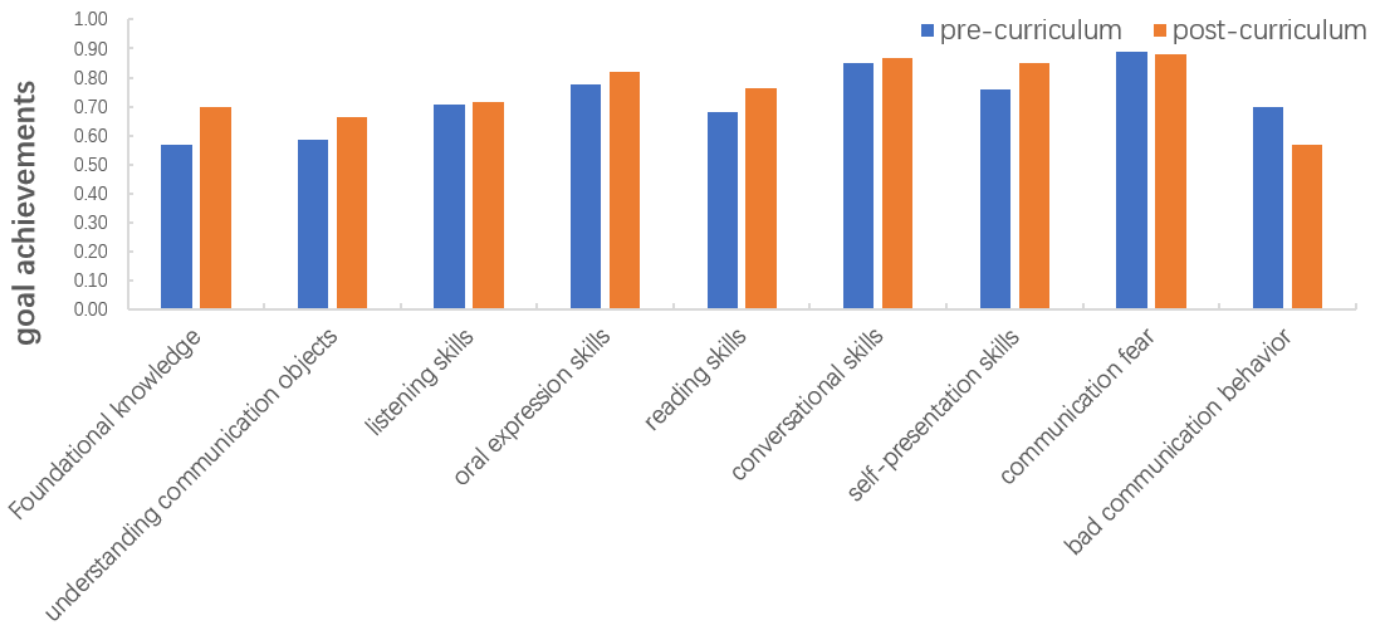### B. The contrast of teaching effectiveness between experiment group and control group

TABLE II. THE CONTRAST OF TEACHING EFFECTIVENESS BETWEEN EXPERIMENT GROUP AND CONTROL GROUP (±S, POINTS)

Group			Control group (n=595)	The experimental group (n=595)	T	P
Primary outcomes	Knowledge	Foundational knowledge	5.68 ± 1.121	7.0 ± 0.96	-26.96	0.000
		Understanding communication objects	4.68 ± 1.192	5.32 ± 1.004	-10.3	0.000
	Communication Skills	Listening skills	7.09 ±0.887	7.179 ± 0.76	-1.827	0.068
		Oral expression skills	12.29 ± 6.710	13.02 ± 6.01	1.558	0.043
		Reading skills	5.59 ± 2.046	5.80 ± 1.907	-1.832	0.067
		Conversational skills	17.03 ± 3.48	17.38 ± 3.46	1.742	0.082
	Behavior self-presentation skills		15.22 ± 8.111	17.01 ± 5.37	-4.991	0.072

Cont. to TABLE II					
Subordinate outcomes	Communication fear	24.95 ± 3.26	24.62 ± 3.02	-1.790	0.074
	Bad communication behavior	1.05 ± 1.398	0.85 ± 1.215	2.637	0.009

Fig.1. The mean out-come goal achievements for chapters between pre-curriculum and post-curriculum group.

The findings of the study (Fig. 1, Table II) are based on key constituents of the OBE framework, which lays stress on interventions, including learning outcome criteria, teaching tactics, and outcome evaluation. The measurement results have shown that the mean score of foundational knowledge, communication skills, self-presentation skills in the experimental group was apparently higher than those of the control group.

1) Effectiveness of OBE methods on foundational communication knowledge

The foundational communication knowledge achievement of undergraduates was gauged. The experimental group (post-curriculum, OBE mean, 7.0 ± 0.96) had a significant grade than the control group (pre-curriculum, 5.68 ± 1.121), with the p value <0.001. There was a significant difference between pre-curriculum and post-curriculum concerning average scores of understanding communication objects (4.68 ± 1.192 vs. 5.32 ± 1.004, p<0.001).

2) Effectiveness of OBE methods on skills representation

The study examined the assessment of communication skills representation after OBE interventions. The total score of self-evaluated communication skills in the experimental group was markedly increased (43.022 vs.42.3528, p= 0.097). And, there were differences in the 4-mini–OBE scores. The average scores of listening skills (p=0.068), oral expression skill (p=0.043), reading skill (p=0.067), conversational skill (p=0.082) were better in the experimental group after undergoing OBE training.

3) Effectiveness of OBE methods on behavior

In the study, the behavioral (self-presentation) skills in the experimental group skills of undergraduates in the post-curriculum are significantly better than pre-curriculum (17.01 ± 5.37 vs. 15.22 ± 8.111, p=0.072). According to the checklist, teacher assessed students by observing their behavior.

4) Subordinate outcome gauges

The study evaluated that the mean communication fear scores of post-curriculum (24.62 ± 3.02) were lower than the per-curriculum (24.95 ± 3.26, p=0.074). The OBE method can reduce the cognitive load of students. The mean bad communication behavior rating for the experimental group (0.85 ± 1.215) was remarkably lower than the control group (1.05 ± 1.398, p = 0.009). The findings from the study attested that OBE method solves the cognitive precondition barrier for the experimental group students, so that they can step on the same starting line, complete the initial starting, and be in the best learning state.

IV. DISCUSSION

A. Teachers play a leading role in OBE methods

This study has proofed that teaching mode based on OBE in communication skills curriculum may facilitate the amelioration in communication skills of undergraduates.

Teachers are the soul of the teaching process. Based on OBE model, teachers skillfully designed problems, aroused students to think positively. Teachers helped students to recall, analogize and associate the relevant knowledge by inspiration, to shorten the "potential distance" between the old and the new knowledge, find ways to solve problems, and achieve teaching objectives. It requires a higher level of coordination. Teachers spent a lot of time and energy on preparing lessons, their guidance was accepted by students to the maximum extent.

B. Limitations

However, student satisfaction is a key indicator of teaching quality [9]. But it is very subjective, this study didn't evaluate student satisfaction from experimental group. Satisfaction in curriculum should be evaluated in future research.

It may be argued that this study applied a self-rated questionnaire to assess communication skills of students, its effectiveness may be questioned. In OBE evaluation, the principle of timely feedback is applied to give full play to students' self- assessment function. However, according to Ross (2006), "self-assessment introduces construct irrelevant variance that threatens the validity of grading" [10]. The competency evaluation which is based on student's representation in self-presentation can be more effective in this study because it synthetically examines the ability of the learner to integrate communication theory, manners, skills [11], and teacher judgments.

V. CONCLUSION

More than 90% of undergraduates will devote themselves to work. For them, "workplace communication" is an important course. This study proposes that OBE means have active effects on the communication skills of undergraduates. Basing on the OBE model, the teacher stimulated the corpus consciousness of students by optimizing the teaching structure, improving teaching methods and creating a good teaching environment. At the same time, teacher timely inspired and encouraged students, so that students to maintain the enthusiasm and initiative in learning, build up learning confidence, improve communication skills. To better contribute to the improvement of teaching quality in Guangdong Ocean University, we will further make the design of experimental research better, add evaluation indicators of other areas of student competencies, and expand the sample size.

REFERENCES

[1] Maes J.D., Icenogle M.L., Weldy T.G. A Managerial Perspective: Oral Communication Competency Is Most Important for Business Students in the Workplace. Journal of Business Communication, 1997,34(34):67-80.

[2] Montagno R.V., Kuratko D.F., Scarcella J.H. Perception of Entrepreneurial Success Characteristics. American Journal of Small Business, 1986,10(3):25-32.

[3] Stotsky S. The Connections between Language Education and Civic Education. ERIC Digest. Journal of Health & Physical Education, 1992,3(8):18-61.

[4] McCurry, M.K., Martins, D.C. Teaching undergraduate nursing research: a comparison of traditional and innovative approaches for success with millennial learners. Journal of Nursing Education, 2010,49 (5):276–279.

[5] Spector, N., Odom, S. Initiative to advance innovations in nursing education. Journal of Nursing Regulation, 2012,3 (2): 40–44.

[6] Singh, M., Ramya, K.R. Outcome based education. International Journal of Nursing Education, 2011,3 (2): 87–91.

[7] Tan K, Chong M.C., Subramaniam P., Wong L.P. The effectiveness of outcome based education on the competencies of nursing students: A systematic review. Nurse Education Today, 2018,64:180.

[8] Biggs, J., Tang, C. Teaching for Quality Learning at University. What the Student Does. Open University Press,2011, pp.389.

[9] Roh, Y.S., Lee, S.J., Mennenga, H. Factors influencing learner satisfaction with team-based learning among nursing students. Nursing & Health Sciences, 2014,16 (4):490–497.

[10] Ross, J.A. The reliability, validity, and utility of self-assessment. Practical Assessment, Research & Evaluation, 2006,11 (10): 1–13.

[11] Fordham, A.J. Using a competency based approach in nursing education. Nursing Standard, 2005,19 (31): 41–48.