



RESEARCH PAPER

Evaluation of Undergraduate Teacher Education Curriculum with reference to Outcome Based Indicators and National Professional Standards for Teachers in Pakistan

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PAPER INFO	ABSTRACT
Received: April 17, 2020 Accepted: June 15, 2020 Online: June 30, 2020	The study was conducted to evaluate existing curriculum with reference to outcome based teacher education. Mix methodology was used. For qualitative aspects document analysis was conducted and courses of B.Ed. (Hons.) designed by Higher Education commission (HEC) were analyzed. For quantitative evaluation questionnaire was developed by following CIPP model with reference to outcome based teachers education. The results of the data analysis revealed that existing curriculum is neither aligned with National Professional Standards for Teachers nor with outcome based indicators. There is need to improve the existing curriculum with respect to "National Professional Standards for Teachers" and outcome based indicators. It is recommended that HEC and Department of Education of different Universities may revise the B. Ed (Honor) curriculum may align existing curriculum with respect to national professional standard for teachers and outcome based teacher education indicators
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Introduction

Quality of education depends upon the quality of teachers and quality of teachers depends on the quality of teacher education programs. To improve the quality of teacher education program (TEP), pre-service teachers (PTs) must understand both course description and application of contents in order to modify the curriculum practices in the classroom (Ricketts, 2014). The course description and aligned application with contents for the curriculum practices was focused in outcome base education. Outcome based education focused on continuous quality

improvements (CQI) in the form of aligning overall learning process with the achievement of course learning outcomes (Kennedy, 2009).

Higher Education Commission (HEC) of Pakistan has designed teacher education programs as B.Ed. (Hon.) 4 year's degree program etc. This teacher training program is available for the training of pre-service teachers in Pakistan (Akhtar, 2012). "To improve the quality of teacher education in Pakistan, and for teaching at elementary level a bachelor's degree in general education with B. Ed. shall be the minimum requirement for teaching. On the other hand a master level for the secondary and higher secondary, with a B. Ed. 1.5 year shall be ensured by 2018" (National Education Policy, 2009).

A "Higher Education Commission" (HEC) meeting was arranged on the title "deliberate teacher education road map". In a meeting, representatives of federal and provincial Punjab Public Service Commission, secretariat approved HEC- teacher education road map under the supervision of executive director HEC. HEC described two main objectives of new teacher education roadmap; first is "raising teacher prestige in society and second ensuring their professional knowledge, skills and competencies" (HEC, 2016). To ensure program wise (e.g. B. Ed, MA etc.) professional knowledge, skills and competencies an updated document was developed by HEC is National Qualification Framework (National Qualification Framework, 2016).

To achieve the knowledge, skills and competencies in higher education a new approach of outcome based education is favored worldwide. Developed and under developed countries like USA, New Zealand, United Kingdom, South Africa, West Australia, and Hong Kong etc. favor outcome based education like USA, New Zealand, United Kingdom, South Africa, West Australia, and Hong Kong for continuous quality improvements in education by refining curriculum components (Akir, Eng, &Maile, 2012). Outcome of teacher education was based on the document titled "National Professional Standards for teachers in Pakistan" which is a collection of relevant "knowledge skills and dispositions" for prospective teachers (NPSTs, 2009).

A new approach of outcome based education is favored worldwide to produce graduates in Higher education with relevant knowledge, skills and competencies. Outcome based education focused on the alignment of courses with the National Professional Standards for Teachers without alignment effective outcomes for teacher education program are not produced (Sumsion & fellow, 2004). Developed and under developed countries like USA, New Zealand, United Kingdom, South Africa, West Australia, and Hong Kong etc. favor outcome based education for continuous quality improvements in education by improving quality (Akir, Eng, &Maile, 2012; Harden 2001; Uchiyama &Radin 2009).

The alignment of course learning outcomes and assessment is not new for curriculum developers. The importance of curriculum alignment for organization

of pattern during training programs focused on the content (Plaza et al. 2007). To update the curriculum and make the course learning outcomes clear for the experts e.g. university teachers there is need to be based on with the relevant domain e.g. cognitive, affective and psychomotor (Harden, 2001). Furthermore Spady (2001) and Hussey & Smith (2003) stated that course learning outcomes are critically important for curriculum developers especially with reference to outcome based education. Experts focused on the aligning the course objectives with respect to clarity, content and assessment through evaluating the curriculum. Stufflebeam & Shinkfield, (2007) has given CIPP model for curriculum evaluation, in this model context means project objectives, future expectations, and needs of project. Input includes methods to meet objectives, personal capabilities, and potential benefit of methodologies. Process includes procedural events and activities e.g. teaching methodologies for the contents of teacher education programs. Product in CIPP model of evaluation is outcomes to measure the objectives to determine effectiveness.

In outcome based curriculum alignment of program learning outcome (PLOs) and course learning outcomes (CLOs) is focused. Alignment of PLOs with the curriculum is used in mapping into the university settings (Wang, 2014). A Delphi study was carried out in Hong Kong by Lam and Tsui, (2013) on the TEP. The finding of the study shows that the alignment of said course learning outcomes with assessment procedure is needed to produce graduate with relevant knowledge, skills and competencies in teacher education programs (Harden, 2006; Darling-Hammond, 2006). Program Learning Outcomes are statements of "what graduates from a particular university degree program should be able to do" in the form of knowledge, skills and disposition result of undertaking the program (Biggs & Tang, 2009). As in "National Professional Standards" in Pakistan, for teachers, it is presented that knowledge, skills and competencies for what graduate teachers enrolled in particular program will be able to do. Eames, (2003) described that PLOs must address as, the kind of "knowledge, skills, abilities and dispositions" for producing ideal graduates should demonstrate upon completion of a program, the ways these capabilities are to be and the types of assessments that can be used to demonstrate development in PTs' knowledge, skills, and dispositions".

In Pakistan, a planned set of courses was designed in the form of different TEPs given by HEC to produce effective outcomes in teacher education. There is need to align course objectives given in the curriculum with the "National Professional Standards for Teachers" to achieve effective outcomes of the programs (Sumsion & fellow, 2004). According to Akhtar, (2012) existing teacher education programs are not satisfactory regarding achievement of course objectives, standards in contents, appropriate teaching methodologies and assessment of the program. There is need to improve course learning outcomes, teaching methodologies and assessment in teacher education curriculum. Hence current study is opted for continuous quality improvement of teacher education programs

focusing on outcome based education by evaluating existing curriculum with respect to outcome based teacher education.

Outcome based curriculum focused on the alignment of the course learning outcomes of courses of teacher education programs with “knowledge, skills and dispositions”; those are given in National Professional Standards, (2009). Different documents as National Education Policy, (2009) and Higher Education Commission, (2016). National Curriculum Revision Committee expressed that there is need of quality improvement in teacher education curriculum. Because “quality of teacher education programs is based on the prescribe curriculum”. Hence there is dire need to improve the current curriculum for the quality of TEPs. At international level outcome based teacher education curriculum are updated but in Pakistani context only curriculum of engineering and medical field are updated hence there is dire need to evaluate existing curriculum with reference to outcome based education.

Material and Methods

Mix methodology was followed to evaluate existing curriculum with reference to outcome based teacher education; in Phase one the curriculum of two courses was evaluated through to check the alignment of CLOs with NPSTs and OBC indicators and in Phase 2 teachers’ educators’ opinion was taken about the alignment of CLOs with NPSTs and OBC Indicators. The population of the study was all the courses of B Ed (Hons) program and all the university teachers of “public sector universities” of education department. A sample of two courses of child development and classroom assessment and 33 university teachers were selected through purposive sampling technique. For phase 1 document of B. Ed (Hons) curriculum by HEC, NPSTs and OBC indicators were followed for documentary analysis. Documentary analysis was validated from five experts of department of education university of Sargodha. For the phase 2, a questionnaire was developed following “context, input, process and product (CIPP)” model of Stufflebeam and validated through the opinion of five educators. On pilot testing Cronbach alpha value was 0.86. For qualitative analysis themes were analyzed and descriptive statistics was used for the evaluation of quantitative data.

Results and Discussion

Table 1
Evaluation of Child Development course (EDU-101) of B.Ed. (Hons.) Program

S#	Course learning outcomes stated in HEC curriculum document	Alignment of CLOs with Outcome based teacher education indicators		
		Taxonomy Domain & Level	Alignment with National Professional Standards for Teachers	Alignment

1	Describe major theories and big themes in how children develop.	Cognitive (Comprehension)	Aligned with NPSTs (developmental abilities)	CLO is Not aligned as OBC
2	Compare the characteristics of various developmental stages according to various theorists.	Cognitive (Analyzing)	aligned with "Human growth and development" (Individual differences)	aligned with OBC indicators
3	Identify factors influencing the learning process	Cognitive (Comprehension)	NOT aligned with "Human growth and development"	CLO is Not aligned as OBC
4	Design different age appropriate teaching methods based on developmental theory	Cognitive (Creating)	aligned with "Human growth and development"	aligned with OBC indicators
5	Identify individual differences of students and children with special needs.	Cognitive (Comprehension)	aligned with "Human growth and development"	CLO is Not aligned as OBC
6	Design different age appropriate teaching strategies based on developmental theory reflection their conceptions about child development and its implications for teaching and learning.	Cognitive (Creating)	aligned with "Human growth and development"	aligned with OBC indicators

Table 1 shows evaluation of the course on "child development" with reference to outcome based education. First course learning outcome "to describe major theories and big themes in how children develop" is relevant to comprehension level of cognitive domain and aligned with second "standard of National Professional Standard for Teachers" (NPSTs), which is on Human growth and development while it has no link with outcome based indicators.

The second course learning outcome "to compare the characteristics of various developmental stages according to various theorists" is relevant to analysis level of cognitive domain; this is aligned with second standard of "National

Professional Standard for Teachers” which is Human growth and development. This learning outcome is also aligned with outcome based indicator.

Third course learning outcome “to identify factors influencing the learning process” is relevant to comprehension level of cognitive domain. This is not aligned with “National professional standard for teachers” and not aligned with any of outcome based indicator.

Fourth course learning outcome “to design different age appropriate teaching methods based on developmental theory” is relevant to creating level of cognitive domain. This is in line with National professional standard for teachers and outcome based curriculum indicators.

Fifth course learning outcome “to identify individual differences of students and children with special needs” is relevant to comprehension level of cognitive domain. This is aligned with the second standard of “National Professional Standard for Teachers” which is Human growth and development. Further, this course learning outcome is not aligned with any of the outcome-based indicator.

Sixth and final course learning outcome “to design different age-appropriate teaching strategies based on developmental theory reflection their conceptions about child development and its implications for teaching and learning’ is relevant to the creating level of cognitive domain. This learning outcome is aligned with the second standard of “National Professional Standard for Teachers” which is Human growth and development. Further, this course learning outcome is aligned with the outcome-based indicator.

In existing curriculum of B. Ed (Hon.), course learning outcomes, there are only three out of six (50%) CLOs are not aligned with outcome-based curriculum indicators whereas Five out of six (83%) CLOs are not aligned with the NPSTs.

Table 2
Evaluation of Classroom Assessment (EDU-207) course of B.Ed. (Hons.) teacher education Program

S#	Course learning outcomes stated in HEC curriculum document	Alignment of CLOs with Outcome based teacher education indicators		
		Taxonomy Domain & Level	Alignment with NPSTs	Alignment with OBC indicators
1	Explain and defend the claim that professional judgment is the essence of classroom assessment	Cognitive (Understanding)	Performance skills in term of "continuous internal evaluation".	CLO is Not aligned as OBC
2	Explainererrorinassess	Cognitive	Reliability and	CLO is Not

	ment, identify potential sources of error, and describe how teachers can compensate for error in assessment	(Understanding)	validity	aligned as OBC
3	Create class room scenarios that illustrate links between instruction, assessment, and learning.	Psychomotor (Mechanism)	Not relevant	aligned with OBC indicators
4	Explain the difference between formative and summative assessments	Cognitive (Creating)	Not relevant	aligned with OBC indicators
5	List the characteristics of constructive written feedback accompanied by an example produced by you on an elementary school student's achievement test	Cognitive (Remembering)	1. Students engagement in the formal classroom practices 2. Skills of feedback through assessment	CLO is Not aligned as OBC
6	Explain why the data obtained from an assessment always has to be interpreted and shared with relevant stakeholders	Cognitive (Understanding)	Not relevant	CLO is Not aligned as OBC

Table 2 shows evaluation of the course on "Classroom Assessment" with reference to outcome based education. First course learning outcome "Explain and defend the claim that professional judgment is the essence of classroom assessment" is relevant to understanding level of cognitive domain; this learning outcome is relevant to fifth standard of "National Professional Standard for Teachers" (NPSTs), which is assessment, While it has link with outcome based curriculum as mentioned in the NPSTs "performance skills in term of continuous internal evaluation" but not addressed as outcome based curriculum.

The second course learning outcome "Explain error in assessment, identify potential sources of error, and describe how teachers can compensate for error in assessment" is relevant to understanding level of cognitive domain; this learning outcome is not relevant to fifth standard of "National Professional Standard for

Teachers" which is assessment. With reference to outcome based curriculum, this course learning outcome is not addressing any indicator of the outcome based curriculum.

Third course learning outcome "Create classroom scenarios that illustrate links between instruction, assessment, and learning" is relevant to mechanism level of psychomotor domain. This course learning outcome is not relevant to "National professional standard for teachers". Further this course learning outcome is relevant to outcome based curriculum indicators.

Fourth course learning outcome "Explain the difference between formative and summative assessments" is relevant to cognitive domain and creating level. This course learning outcome is in line with National professional standard for teachers and outcome based indicators.

Fifth course learning outcome "List the characteristics of constructive written feedback accompanied by an example produced by you on an elementary school student's achievement test" is relevant to cognitive domain and remembering level. This course learning outcome is relevant to the fifth standard of National Professional Standard for Teachers; which is assessment. Further, this course learning outcome is not relevant to the outcome based curriculum.

Sixth and final course learning outcome "Explain why the data obtained from an assessment always has to be interpreted and shared with relevant stake holders" is relevant to the cognitive domain and understanding level. This learning outcome is relevant to the fifth standard of National Professional Standard for Teachers which is assessment. Further, this course learning outcome is not addressed in the outcome based curriculum.

In existing curriculum course learning outcomes are not relevant to the outcome-based curriculum. Evaluation of the course on "classroom assessment" in the existing curriculum of B. Ed. (Hons) shows that course learning outcomes are according to updated taxonomy developed by (krathwohl, 2002), but there was no alignment. On the other side third and fourth CLOs are aligned with outcomes based indicators while CLO, one, two, fifth and sixth are not aligned with outcome based indicators.

Table 3
Views of university teachers regarding Context, Input, Process and Product CIPP of existing B. Ed (Hon.) curriculum w.r.t NPSTs & OBC

Q #	Statements	SD f (%)	D f (%)	Neutral f (%)	A f (%)	SA f (%)
	Context					
1	A mission statement is defined in the "curriculum of B. Ed (Hons) program".	7(21)%	19(57)%	2(6)%	3(9)%	2(6)%

Evaluation of Undergraduate Teacher Education Curriculum with reference to Outcome Based Indicators and National Professional Standards for Teachers in Pakistan

2	A vision statement is given in the "curriculum of B. Ed (Hons) program".	2(6)%	27(81)%	1(3)%	1(3)%	2(6)%
3	Courses learning outcomes of B. Ed (Hons) program are associated with "National Professional Standards for teachers in Pakistan".	3(9)%	22(67)%	3(9)%	2(6)%	3(9)%
4	Course "learning outcomes" are described with reference to updated Bloom taxonomy.	2(6)%	27(81)%	1(3)%	2(6)%	1(3)%
Input						
5	The sequence of course outline is according to course "learning outcomes" of B. Ed (Hons) programs.	2(6)%	26(79)%	2(6)%	2(6)%	1(3)%
6	Course "learning outcomes" of B. Ed (Hons) programs are helpful for enhancing research report writing skills of prospective teachers.	3(9)%	25(75)%	2(6)%	1(3)%	2(5)%
7	Course "learning outcomes of B. Ed (Hons) programs" are helpful for enhancing skills of reflection of prospective teachers.	4(12)%	25(75)%	2(6)%	1(3)%	1(3)%
8	Course" learning outcomes of B. Ed (Hons) programs" are helpful for enhancing problem solving abilities of prospective teachers.	2(6)%	24(72)%	3(9)%	3(9)%	1(3)%
Process						
9	Multiple teaching methodologies are designed to achieve "course learning outcomes of B.Ed (Hons) program".	5(15)%	21(64)%	2(6)%	2(6)%	3(9)%
10	The role-play method is used for the skills practice of prospective teachers to achieve "course learning outcomes of B. Ed (Hons) program".	5(15)%	20(61)%	3(9)%	3(9)%	2(6)%
11	Workshops are conducted to achieve course learning outcomes during B. Ed (Hons) program.	2(6)%	24(73)%	2(6)%	3(9)%	2(6)%

12	A Final -term exam is conducted to assess course learning outcomes during B. Ed (Hons)	3(9)%	21(64)%	4(12)%	3(9)%	2(6)%
Product						
13	Examination question papers are related to cognitive domain.	4(12)%	21(64)%	2(6)%	4(12)%	2(6)%
14	Examination papers are related to affective domains.	3(9)%	23(70)%	3(9)%	2(6)%	2(6)%
15	Examination papers are related to psychomotor domains.	2(6)%	25(76)%	1(3)%	3(9)%	2(6)%
16	Assessment techniques used during B. Ed (Hons) programs were based on "course learning outcomes".	3(9)%	22(67)%	3(9)%	2(6)%	3(9)%

Table 3 shows views of university teachers about existing curriculum with reference to outcome based teachers education curriculum with respect to context of CIPP model. According to 81% respondents disagreed or strongly disagreed that vision statement is defined in the existing curriculum of B. Ed (Hon.) program. While only 9% agreed or strongly agreed with the statement. 84% respondents not favored the statement that course learning outcome in the courses of existing curriculum are associated with the "National Professional Standards for Teachers in Pakistan". While only 8% favored the statement. 76% respondents disagreed or strongly disagreed that sequence of course outline is according to course learning outcomes of B. Ed (Hon.) programs. While only 15% agreed or strongly agreed with the statement. 87% respondents disagreed or strongly disagreed with the statement that course learning outcomes of B. Ed (Hon.) programs are helpful for enhancing skills of reflection of prospective teachers. While agreed and strongly agreed response was an only 3%. The analysis show that CLOS of B. Ed (Hon.) curriculum do not fulfill context of NPSTs or OBC indicators.

Further according to input of CIPP model, 85% respondents disagreed or strongly disagreed with the statement that the sequence of course outline is according to course learning outcomes of B. Ed (Hon.) programs. While only 9% agreed or strongly agreed with the statement. Eighty four percent (84%) respondents disagreed or strongly disagreed with the statement that course learning outcomes of B. Ed (Hon.) programs are helpful for enhancing research report writing skills of prospective teachers. While only 11% agreed or strongly agreed with the statement. Similarly 87% respondents disagreed or strongly disagreed with the statement that Course learning outcomes of B. Ed (Hon.) programs are helpful for enhancing skills of reflection of prospective teachers. While only 9% agreed or strongly agreed with the statement. Moreover 78% respondents disagreed or strongly disagreed that course learning outcomes of B.

Ed (Hon.) programs are helpful for enhancing problem solving abilities of prospective teachers. While only 12% agreed or strongly agreed with the statement. The analysis shows that CLOs of B. Ed (Hon.) programs do not fulfill the input of CIPP model.

Further according to process of CIPP model, 79% respondents disagreed or strongly disagreed with the statement that multiple teaching methodologies are designed to achieve course learning outcomes of B. Ed (Hon.) program. While only 15% agreed or strongly agreed with the statement. Similar to this 76% respondents disagreed or strongly disagreed with the statement that the role-play method is used to achieve course learning outcomes of B. Ed (Hon.) program. While only 15% agreed or strongly agreed with the statement. Similarly 79% respondents disagreed or strongly disagreed with the statement that workshops are conducted to achieve course learning outcomes during B. Ed (Hon.) program. While only 15% agreed or strongly agreed with the statement. Moreover 73% respondents disagreed or strongly disagreed with the statement that the exam is conducted to assess course learning outcomes. While only 15% agreed or strongly agreed with the statement. The analysis shows that CLOs of B. Ed (Hon.) programs do not fulfill the proper process according to of CIPP model.

Adding to it, according to product of CIPP model, 74% respondents disagreed or strongly disagreed with the statement that examination question papers are related to cognitive domain. While only 18% agreed or strongly agreed with the statement. 79% respondents disagreed or strongly disagreed with the statement that examination papers are related to affective domains. While only 12% agreed or strongly agreed with the statement. Similarly, 82% respondents disagreed or strongly disagreed with the statement that examination papers are related to psychomotor domains. While only 15% agreed or strongly agreed with the statement. Moreover 76% respondents disagreed or strongly disagreed with the statement that the assessment techniques used during B. Ed (Hon.) programs are not based on course learning outcomes. While only 15% agreed or strongly agreed with the statement. The analysis shows that CLOs of B. Ed (Hon.) programs do not show the proper product according to of CIPP model.

Conclusion

To evaluate existing curriculum with reference to outcome based teacher education the results show that existing curriculum has some alignment with second standard of “National professional Standards for Teachers in Pakistan” (NPST) but not in a complete way. The possible reason of this is this B. Ed (Hon.) curriculum was developed by HEC while NPSTs were developed under the supervision of Ministry of Education with the funds support of USAID. Obviously there was no coordination between the two departments.

Moreover the analysis show that according to majority of university teachers, the CLOs of existing B. Ed (hon.) courses neither fulfill context of NPSTs

or OBC indicators nor these fulfill the input of CIPP model. Further it is also revealed that CLOs of existing B. Ed (hon.) courses do not fulfill the proper process according to of CIPP model and not showing the proper product according to of CIPP model. Its reasons may be that the curriculum was developed according to traditional way and no modern theory or model was followed. Though from traditional curriculum it was a bit different as the students' participative approach was used but that is not appropriate according CIPP model for evaluation of curriculum.

Recommendations

Outcome based education focused on the learned knowledge, skills and disposition results from particular training program as e.g. B.Ed. (Hon.) as Eames, (2003) studies discuss that PLOs as "National professional Standards for Teachers in Pakistan" describe knowledge, skills and competencies and Sumsion and fellow (2004) said that without alignment of CLOs effective outcomes are not produced. In existing curriculum of B.Ed. (Hons.) alignment is required. Spady, (2001) said that effectiveness of program cannot ensure without alignment of overall procedure and its understanding of stakeholder. Harden (2001) explored that to clear the tracked course learning outcomes in the complete course of study to update the curriculum. Hence for complete course or training program there is need to align the CLOs. So there is needed to align all the aspects of the curriculum of B. Ed (Hon.) program.

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