

Learning from service users in health and social care higher education contexts: validating the Huddersfield Service User Pedagogy Scale

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Background: there is global recognition that the inclusion of service users in the education of health and social care students in higher education can lead to more compassionate professional identities which will enable better decision making. However, to date there is no systematic tool to explore learning and service user involvement in the curriculum.

Objectives: to generate and validate a psychometric instrument which will allow educators to evaluate service user pedagogy.

Design: construction and validation of a new scale.

Participants and settings: 365 undergraduate students from health and social care departments in two universities.

Results: a two correlated factor scale. Factor 1 – perceived presence of service users in the taught curriculum and factor 2 – professionals and service users working together (correlation between factor 1 and factor 2 – $r=.32$)

Conclusions: The Huddersfield Service User Pedagogy Scale provides a valid instrument for educators to evaluate student learning. In addition, the tool can contribute to student reflections on their shifting professional identities as they progress through their studies.

Key words: service user involvement, health and social care education, scale validation

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Introduction

There is global recognition of the contribution that patients and the wider public can make to the education of health professionals (Petit-Zeman & Locock, 2013). The European Union and State Government in the USA have allocated funding to explore patient involvement in decision making acknowledging the emerging importance of patient voices. Patient involvement in education has been identified as a benefit across the world (Towle, Farrell, Gaines, Godolphin, John, Kline, Lown, Morris, Symons & Thistlethwaite, 2016) The presence of service users, that is those people who have participated in a given service such as health care or social support as a patient or client, in the delivery of health and social care degree programmes in UK universities is now mandatory (Scammel, 2015). The participation of the service user is mandated by Government and by professional bodies (Rhodes, 2012). The purpose of service user involvement has emerged as a response to professional and public concerns regarding health professionals' understandings of service user needs and their ability and willingness to demonstrate empathy. To date there is some research which has explored the principles and process of this initiative (see Terry, 2012 for a review of service user involvement in mental health pre-registration education) and some which has sought to explore student engagement (O'Donnell & Gormley, 2012) and the service user's approach (Tremayne, Russell & Allman, 2014). However, perhaps as a result of the limited time span during which this initiative has been operational, there is a paucity of literature which evaluates student learning in response to service user involvement. Petit-Zeman and Locock (2013) suggest that this paucity of evidence is true on an international scale. Given the importance of the service user inclusion initiative to enact long term change in the delivery of health and social care in the UK and internationally, it is incumbent upon educators to evaluate the efficacy of the teaching and learning. Moreover, in order that educators can design appropriate curricula, it is important that there is an understanding of what students learn through engagement with service users and how such learning contributes to their developing professional identity. To date there is little evidence which indicates how learning happens or what is learned. In this paper we propose a scale which goes some way to addressing that.

Scammel, Heaslip and Crowley (2015) conducted a systematic review of service user involvement in pre-registration nursing programmes. They identified a small number of small scale studies which demonstrated that all stakeholders (students, academics and service users) report deriving benefits from the service user involvement but they point out that the research mostly focuses on the perceptions of participants. That is the research asks what benefits they think they gained. Scammel, Heaslip and Crowley (2015) call for further research which explores the impact on learning of service user involvement. This is echoed in the social work literature where Robinson and Webber (2013) in their literature review of service user involvement in social work education found support from all parties for inclusion of service users in the curriculum but little evidence of what the impact of such inclusion on social work students actually is. There is little indicative literature from other interested disciplines.

The purpose of service user involvement in education

Service user involvement in health and social care emerges in part from macro shifts surrounding the power of professionals. The 'expert professional who always knows best' model has been

problematized in recent years and patient/client – professional partnership models are in the ascendant (McCutcheon & Gormley, 2014). There is now an imperative in the delivery of health and social care to ‘involve’ the service users’ voice. This notion of what constitutes involvement however has become a focus of research and discussion (Rhodes, 2012). The notion is that service user involvement in education will result in compassionate professionals who interact with their clients and patients in ways that are meaningful to the client. A major report for the UK National Health Service in response to fatal failings in the delivery of health care in one area of the UK, calls for a focus on the six Cs. That is care, compassion, competence, communication, courage and commitment (Francis Report, 2013). One method to encourage the development of the six Cs is service user involvement from the beginning of professional careers: that is in initial education.

However, it has been pointed out that the nature of involvement is key (Rhodes, 2012; McCutcheon & Gormley, 2014). Reference is made to Tew, Gell and Foster’s (2004) work on levels of involvement in mental health education and training. They posit a range of involvement models from zero presence to partnership. In a full partnership model, the service user would have a say in the curriculum design, delivery and assessment. In such models, the focus of education is on patient centred care and one of the roles of the service user is to encourage putative professionals to reflect upon their approach to care and understanding of what care means. Towle, Bainbridge, Godolphin, Katz, Kline, Lown, Madularu, Solomon and Thistlethwaite (2010) provide a North American point of view. They endorse the valuable contribution of service users (termed patients as educators) to enabling collaboration, shared decision making and improved self-care but note that there is a lack of systematic and frequent involvement of patients in educational settings. In addition, they report a paucity of understanding of what the impact of such involvement might be on students. Irvine, Molyneux and Gillman (2015) in their research with social work students note the need for a range of service users. Where students felt that service user involvement was non-representative, they were less satisfied with the learning experience. Tanner, Littlechild, Duffy and Hayes (2015) conducted a mixed method study to investigate service user impact on social worker education and beyond into practice. They propose a model for students, educators, service users and practitioners which invites focus on four categories from individual student dispositions to context driven practices. However, the methodology of a non-validated questionnaire and focus groups with small participant numbers may challenge this proposition. But, the research does demonstrate further the need to understand the impact of service user involvement.

The pedagogy of service user involvement

Mckeown, Dix, Jones, Carter, Malihi-Shoja, Mallen and Harrison (2014) note the potential for service user involvement to be transformative of State organisations of care. One element of such transformation is the behaviour of professionals. Whether explicitly stated or not, the new service user pedagogy imperative can be explained in terms of a contemporary learning theory; that is socio-cultural theory. In socio-cultural theory, learning emerges as a result of the interaction of the person with the context (Wenger, 1998; Bronfenbrenner, 1999) and that learning can be understood by observing professionals’ behaviour and understandings of the community’s practices (Tobbell & O’Donnell, 2013). In the case of service user pedagogy, the notion is that student interaction with people who have personal experience of professional care in the context of their university studies should serve to construct more empathetic professional identities. Confinement of interaction to practice placements would serve to separate theory from practice and so undermine the presence of

the service user in all parts of health and social care education. This may lead to a university identity and a practice identity which would undermine an empowered and competent integrated professional identity. A socio-cultural evaluation of student learning would be grounded in the experience of that learning and in the degree to which the experience results in desired behaviour. In this project we wanted to know if health and social care students can identify service user involvement in their learning and explore if their identities shift towards the six Cs identified above.

Rationale for this research

A range of research and theory argues that the character of the service user presence influences student learning and that effective learning results in behavioural change. But there is an international consensus that there is a paucity of research which evaluates the outcomes of service user pedagogy in health and social care higher education programmes. To this end, we seek to create an instrument which will allow educators to understand the engagement of the individual student with their teaching and learning experiences.

Research aims

The goal of this research is to generate and validate a psychometric instrument which will allow educators to evaluate the new service user pedagogy. We seek to generate a valid instrument based on theoretical and empirical imperatives which will assess student awareness of the service user contribution to their study (and here we stress that it is the study element of the curriculum in which we are interested rather than the practice element) and in addition explore the outcomes of the learning which students experience.

Methods

Participants

Participants ($N = 365$) were 299 female and 66 male university students recruited from various health and social care related degree programmes in two UK universities (nursing = 150, podiatry = 50, midwifery = 46, occupational therapy = 27, Operation Department Practice = 28, physiotherapy = 45, social work = 19). One hundred and forty ($n = 140$) participants were aged between 18 and 21 years, 91 between 22 and 25, 74 between 26 and 35, 42 between 36 and 45, and 18 were 46 years old and over. Most of the participants were white British (84.2%). A priori sample size calculation for the proposed model was based on Westland's (2010) recommendation. The minimum sample size to detect effect is 296 (anticipated effect size = 0.2, desired statistical power level = 0.8, and probability level = 0.05).

The Scale

The Huddersfield Service User Pedagogy Scale is a two-part questionnaire which seeks to assess the interaction of perceived exposure to service users in the degree programme with identity shifts towards the valued health and social care behaviours which underpin desirable professional behaviour. The Scale items emerge from contemporary theoretical understandings of learning and empirical work surrounding the objectives of service user pedagogy.

The first section of the scale asks students to react to statements about the presence of service users in their university learning. The second section of the scale asks students to react to statements regarding professional practice with particular emphasis on service user contact.

Procedure

Stage One – scoping the area

The first stage of the construction of the scale involved a literature review to establish the underpinning philosophy of service user involvement in higher education. Following this an analysis was made of all documentation surrounding curricula which demand service user pedagogy. The review and document analysis underpinned the items generated for the second part of the scale, which explores learning as a result of service user participation. The purpose of that participation is rehearsed in the literature review above.

This process informed interviews with subject matter experts. Six senior staff who had been involved in writing the above curricula in the allied health professions and social work were identified. They were interviewed and asked to describe aspects of the curriculum which involved service user input and the associated learning objectives. This enabled the generation of items for the first part of the scale: the type of participation and frequency to enable the learning objectives identified above.

Stage two – generating a draft scale

The literature review and interviews, combined with a socio-cultural learning ontology, enabled the generation of scale items.

The scale was designed in two sections: teaching and learning.

The original teaching section contained 15 items which reflected involvement of service users in teaching. Table 1 below shows the original items included in the teaching section of the scale.

Table 1

Pre-validation items – service user involvement in teaching.

1. A service user was involved in my recruitment to my degree programme.
2. The voice of the service user is very clear in the teaching on my degree.
3. Service user needs are strongly highlighted in the curriculum.
4. I have seldom encountered a service user in my studies outside clinical practice.
5. I have had frequent opportunities to help me understand service user experiences.
6. I am aware that service users have contributed to the design and content of teaching in my degree.
7. I have never received feedback about my performance from service users throughout my study.
8. I have discussed the experiences of service users during classroom learning.
9. I have had regular access to service user experiences through a variety of methods (stories, videos, case studies, face to face contact) during my studies.
10. Service users have been part of the teaching team throughout my study.
11. I have never received feedback from service users about my performance during my study.
12. I have had face to face contact with service users in the classroom.
13. Very few of my modules include the service user perspective.
14. I have not seen any evidence of service user contributions to my degree programme.
15. I have encountered different service users in my classroom study during my degree.

Post validation items 1, 4, 7, 11, 13 and 14 were excluded from the scale as they did not contribute to the latent construct. Table 2 below shows the original items included in the learning in response to service user involvement section of the scale.

Table 2

Pre-validation items – learning in response to service user involvement in teaching.

1. As a result of service user contributions to my studies I have changed my approach to practice.
2. Service users always know the best course of action for themselves.
3. The majority of actions should follow shared decision making between the service user and the professional.
4. I would always share all the information I have with the service user.
5. It is always important to use professional terminology when discussing options with service users.
6. I would support a service user's decision even if I disagreed with it and providing the decision would not endanger them or others.
7. It is always appropriate to gently challenge service user decisions with evidence.
8. It is often better to do what you think is right as a professional, even if the service user disagrees.
9. When there is a difference of views between the professional and the service user, it is the professional view that is the more important.
10. The service user's story is the most important aspect in making professional decisions.
11. Even at busy times it is important to spend time getting to know the service user.
12. Service users do not always need to be part of discussion in interprofessional decision making.
13. If I thought the safety of the service user was being compromised, I would always tell my manager.
14. The service user should be allowed to take the lead in discussions with me.
15. Service users' feelings are much more important than keeping to appointment times.
16. My observations of service user needs should feedback into organisational decision making.

Post validation items 1, 5, 7, 8, 9, and 12 were excluded from the scale because they did not contribute to the latent construct.

The original 30 item scale was scored using a five point Likert Scale from Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree. The final scale comprises 19 items (see table four below).

Stage Three – service user scrutiny

The draft scale was circulated to the School Public Partnership Group (PPG) who were invited to review the questions and suggest amendments. The terms of reference for this group are to lead on strategic development of service user and carer involvement in education and research. It consists of a range of people, all of whom have extensive personal or carer experience of health and social care including major surgery, mental health illness and recovery, special needs and disability. The group read all of the questions as a group exercise, checking understanding and making suggestions for change. All items above remained but wording was altered in some.

Stage Four – administering the scale

The questionnaire was administered in two ways.

The questionnaire was loaded on Qualtrics and students in the allied health professions and social work from two universities were invited to complete it. Information and consent was communicated via Qualtrics prior to completion. In addition, representative samples of potential participants were invited to complete the measure during their associated lectures. All participants were given an information sheet which outlined instructions for completion and the purpose of the research. There were no incentives offered and no obligations were imposed to promote participation. A paper version of the measure was then administered to participants who provided informed consent. All participants were assured of anonymity and the right to withdraw data up until the point of submitting their form. As all the measures were anonymous there was no opportunity to withdraw following submission. All participants were thanked for their cooperation in this research.

The research was carried out with ethical approval from the School Research and Ethics Panel overseen by the University Ethics Panel.

Analytical Approach

The purpose of this study was to investigate the structure of the scale, that is the number and nature of the latent factors which the items represent. The construct validity and dimensionality of the Huddersfield Service User Pedagogy Scale (HSUPS) was investigated through the use of conventional confirmatory factor analytic (CFA) methods and confirmatory bifactor modelling (see Reise, Moore & Haviland, 2010). In addition, CFA enables an exploration of the relationship between latent factors. The scale proposes theoretically that service user involvement in the curriculum can be explored through student perceptions of service user involvement in that curriculum and also through student understanding of what it means to work with service users. Further, it hypothesises that these two factors will be significantly correlated. In order to test dimensionality of the measure and investigate the latent factors structure, three alternative models of the Huddersfield Service User Pedagogy Scale were specified and estimated using Mplus version 7.4 (Muthén & Muthén, 1998 – 2015) with WLSMV estimation.

Model 1 is a one-factor solution in which all items load onto a single latent variable, that is all items measure the same single construct. Model 2 is a correlated two-factor model, that is the scale measures two different factors which are correlated. Model 3 is a bifactor conceptualization, containing two grouping factors (Factor 1 = *Perceived presence of service users in the taught curriculum*, Factor 2 = *Professionals and service users working together*) and one general factor. That is the scale measures two correlated factors and at the same time controls for one overall general factor – in this case learning in response to service user involvement in the curriculum. The overall fit of each model and the relative fit between models were assessed using a range of goodness-of-fit statistics: the chi-square (χ^2) statistic, the Comparative Fit Index (CFI; Cronbach, 1990), and the Tucker Lewis Index (TLI; Tucker & Lewis, 1973). For CFI and TLI, values above 0.95 indicate good model fit (Bentler, 1990; Hu & Bentler, 1999). In addition, the root mean-square error of approximation (RMSEA; Steiger, 1990) with 90% confidence interval is presented. Ideally, this index should be equal or less than 0.05 to suggest good fit (Hu & Bentler, 1999). Furthermore, the WRMR (Weighted Root Mean Square Residual) was used to evaluate the alternative models, with the

smaller value indicating the best fitting model – that is the model which best represents the meaning of the scale in terms of student learning.

Results

HSUPS scores ranged from 41 to 76 ($M = 59.38$, $SD = 3.97$, $Mdn = 59$), Factor 1 which reflects *Perceived presence of service users in the taught curriculum* ranged from 11 to 36 ($M = 28.58$, $SD = 4.14$, $Mdn = 28$), and Factor 2 which reflect *Professionals and service users working together* ranged from 10 to 40 ($M = 30.90$, $SD = 3.96$, $Mdn = 30$). Table 3 shows the fit indices of the 3 alternative models of the Huddersfield Service User Pedagogy Scale.

Table 3:

Fit Indices for Three Alternative Models of the Huddersfield Service User Pedagogy Scale

	χ^2	<i>df</i>	CFI	TLI	RMSEA (90% CI)	WRMR
1. One Factor Model	1086.89***	152	.68	.64	.13 (.12/.14)	2.26
2. Two Factor Model	444.78***	151	.90	.89	.07 (.06/.08)	1.37
3. Bifactor Model (4 grouping factors)	277.83***	133	.95	.94	.05 (.04/.06)	.92

Note. χ^2 = chi square goodness of fit statistic; *df* = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root-Mean-Square Error of Approximation; CI = Confidence Interval; WRMR = Weighted Root Mean Square Residual.

*** indicates χ^2 is statistically significant ($p < .001$).

Models 1 and 2 were rejected based on RMSEA (above 0.05), CFI and TLI (less than 0.95) statistics. Model 3 (bifactor solution) was found to provide acceptable representation of the data (RMSEA = .05, CFI = .95, TLI = .94) with the lowest Weighted Root Mean Square Residual (.92). Furthermore, the adequacy of a model should also be determined in relation to its parameter estimates. Factor loadings for each grouping factor were comparatively stronger than those on the general factor (see Table 4). These results provide support for the supremacy of a two latent factors (factor 1 = *Perceived presence of service users in the taught curriculum*, factor 2 = *Professionals and service users working together*) and the presence of one general factor. It is recommended that the HSUPS should be used as a two correlated factor scale (correlation between two factors was $r = .32$).

Table 4 below demonstrates that the factor loadings for ‘Perceived presence of service users in the taught curriculum’ and ‘Professionals and service users working together’ are higher than for the general factor of learning in response to service users in the curriculum. This suggests that the scale should be scored and understood by reference to the two sub-scales. That is, two measures, one indicating student perceptions of service user involvement and the second indicating their understanding of what it means to work with service users. However, the correlation between the two factors means that there is a relationship between perception of involvement and understanding of working with service users, indicating that the scale has a coherent structure.

Table 4: Standardized Factor Loadings for the bifactorial solution (General = General factor, Factor 1 = Perceived presence of service users in the taught curriculum, Factor 2 = Professionals and service users working together)

Original item numbers	General	Factor 1	Factor 2
<i>Teaching Section</i>			
2. The voice of the service user is very clear in the teaching on my degree.	.06	.70***	
3. Service user needs are strongly highlighted in the curriculum.	.08	.79***	
5. I have had frequent opportunities to help me understand service user experiences.	.14	.71***	
6. I am aware that service users have contributed to the design and content of teaching in my degree.	.21*	.64***	
8. I have discussed the experiences of service users during classroom learning.	.25**	.57***	
9. I have had regular access to service user experiences through a variety of methods (stories, videos, case studies, face to face contact) during my studies.	.25**	.75***	
10. Service users have been part of the teaching team throughout my study.	.45***	.60***	
12. I have had face to face contact with service users in the classroom.	.32***	.62***	
15. I have encountered different service users in my classroom study during my degree.	.40***	.86***	
<i>Learning Section</i>			
13. If I thought the safety of the service user was being compromised, I would always tell my manager.	.43***		.61***
16. My observations of service user needs should feedback into organisational decision making.	.37***		.60***
3. The majority of actions should follow shared decision making between the service user and the professional.	.30***		.42***
4. I would always share all the information I have with the service user.	.28***		.44***
11. Even at busy times it is important to spend time getting to know the service user.	.38***		.69***
14. The service user should be allowed to take the lead in discussions with me.	.22***		.57***
15. Service users' feelings are much more important than keeping to appointment times.	.07		.58***
2. Service users always know the best course of action for themselves.	.22***		.45***
6. I would support a service user's decision even if I disagreed with it and providing the decision would not endanger them or others.	.27***		.61***
10. The service user's story is the most important aspect in making professional decisions.	.28***		.52***

Note. Factor loadings are statistically significant at * $p < .05$; ** $p < .01$; *** $p < .001$

The use of traditional measures of internal reliability such as Cronbach's alpha (Cronbach, 1990) have been criticised within a latent variable modelling context given the propensity to over or underestimate scale reliability (Raykov, 1998). In order to provide a rigorous assessment of the internal reliability of the Huddersfield Service User Pedagogy Scale items, composite reliability was performed. Current results indicate that the internal reliability for the two factors was very good (factor 1 = .89, factor 2 = .81). This means that the items in each sub-scale, reliably measure the proposed constructs. For example, when students agree and strongly agree that they have had contact with service users in recruitment and teaching, this provides a reliable measure of their perceptions of service user involvement. Equally, an understanding that service users are equal partners in care is indicated by items such as supporting a service user's decisions and allowing service users to lead discussions.

Discussion

The stated aim of this research was to generate a validated scale to allow educators to evaluate the participation of service users in the curriculum on student learning. The scale emerged from theoretical and empirical understandings of learning and the objectives of service user pedagogy. It seeks to evaluate health and social care putative professionals' learning surrounding working relationships with service users in practice. The results show the scale is a valid tool. Further, the moderate association ($r=.32$) between the two factors demonstrates that there is a relationship between perceived presence of service users in the curriculum and shifts in student identity towards an understanding that desirable professional practice means working in partnership with service users. In terms of the use of the scale in teaching and learning, this means that educators and students need to understand the contribution of both factors to appreciate the influence of service user involvement in learning. The pedagogic goals of educating compassionate professionals cannot be evaluated by reference to just perceived presence of service users. There must be reference to the concomitant understanding of collaborative working.

The underpinning meanings of the scale items are important because they contribute towards an understanding of what service user pedagogy should look like and what the impact might be. Factor 1, *the perceived presence of service users in the curriculum* suggests that identity shift emerges from an intensity of service user presence. The student needs to be aware that the service user has input into all aspects of the curriculum. Even when the service user is not physically present their imprint needs to be visible. Moreover, the contribution needs to be varied. There should be a range of service users and the experience should be communicated in different ways. This represents useful guidance for educators. It is not always possible to ensure that service users are physically present but a library of resources can be established, representing service user experiences via case studies and videos for example. In part the responses to the HSUPS allow the Tew et al (2004) question of the level of involvement to be addressed – the involvement needs to be pervasive, recognisable and varied. There is also support for Molyneux and Gillman's (2015) work indicating the need for a range of different service users to ensure positive student reaction.

Contemporary learning theory states that in order for development to occur, an individual must engage in frequent and increasingly complex activity (Bronfenbrenner, 1999). The items in factor 1 of the HSUPS demonstrate the mechanism of this in service user pedagogy. There is a range of opportunity to encounter service user experiences; there is a range of different activity to encourage

discussion and reflection on service user experience and together this enables increasingly complex understanding.

The nature of the identity shift can be understood by reference to the scale items in factor 2 – *professionals and service users working together*. The factor reflects some of the components of the 6 Cs (Francis Report, 2013) discussed above. The scale items provide evidence that increasing interaction with service users results in increasing commitment to the care of the service user, from an acknowledgement of the individual service user experiences to relinquishing agenda setting in favour of the service user. Although importantly the professional imperative for avoiding harm to the service user is maintained.

Scammel et al (2015) point out that there is little evidence that explains the nature of the learning in response to service users. The responses to this validation study provide some evidence. Wenger (1998) points out that learning can be understood as identity shift. A shift in identity occurs as a response to participation in the practices of a community. The nature of those practices is key. The foregrounding of the service user means that students participate in a community where being a professional means being in partnership with patients and clients – this is fundamental to successful participation in their university studies. Students demonstrate this learning through an appreciation of the need to share information and decision making with a service user. Getting to know a service user is as important a part of being a health and social care professional as theoretical knowledge.

The perceived presence of service users (factor 1 in this scale) can be said to represent the practices of the pedagogic approach of the educational institution. These practices are inextricably linked to the resultant learning (factor 2), represented in this scale as understandings of service user – professional relationships. The utility of HSUPS is therefore twofold. Firstly, it can be employed by educators to investigate student perceptions of service user involvement and the concomitant impact. Secondly, and perhaps more importantly, it can be employed as a teaching and learning tool to enable students to reflect on their shifting professional identities as they progress through their studies.

We acknowledge that the research reported here represents just two universities and that further research is needed to fully understand the relationship between perceived presence and professional – service user relationships. However, we would argue that the HSUPS goes some way to meeting the gaps identified in the literature surrounding service user pedagogy but requires further investigation with a wider range of health professionals and higher education institutions both in the UK and across the globe.

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